

B. 3040

Proceedings

(140)

15



INDEX

TO THE

SELECTIVE DOCUMENTS

PREPARED BY THE

SENATE OF THE UNITED STATES

AND

HOUSE OF REPRESENTATIVES

OF

THE SPECIAL SESSION

1900-01

IN FIVE VOLUMES

Volume 1. January 1, 1900.

Volume 2. January 1, 1900.

Volume 3. January 1, 1900.

Volume 4. January 1, 1900.

Volume 5. January 1, 1900.

Volume 6. January 1, 1900.

Volume 7. January 1, 1900.

Volume 8. January 1, 1900.

Volume 9. January 1, 1900.

Volume 10. January 1, 1900.

WASHINGTON

OFFICE OF THE CLERK OF THE SENATE

1901

INDEX
TO THE
EXECUTIVE DOCUMENTS,
PRINTED BY ORDER OF THE
SENATE OF THE UNITED STATES
FOR THE
SECOND SESSION OF THE THIRTY-SIXTH CONGRESS;
AND OF
THE SPECIAL SESSION.
1860-61.

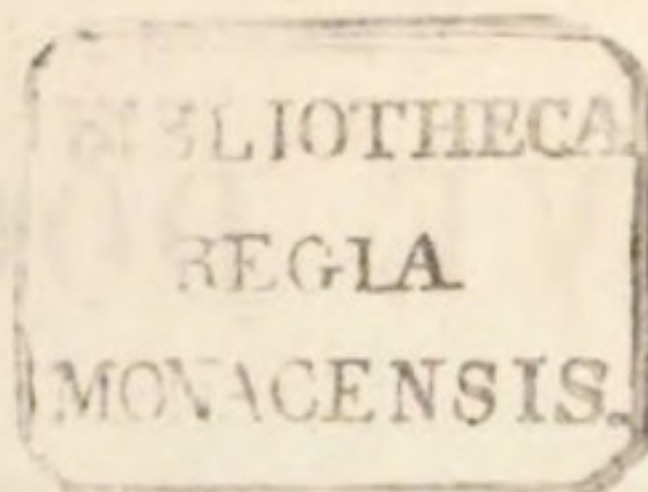
IN NINE VOLUMES.

- Volume 1 contains No. 1 part 1.
Volume 2 contains No. 1 part 2.
Volume 3 contains No. 1 part 3.
Volume 4 contains No. 2 to 13, with Nos. 1 and 2 of special session, except Nos. 6, 7, and 9.
Volume 5 contains No. 7 part 1.
Volume 6 contains No. 7 part 2.
Volume 7 contains No. 9.
Volume 8 contains Report on Commerce and Navigation.
Volume 9 contains No. 6 in quarto.

WASHINGTON:
GEORGE W. BOWMAN, PRINTER.
1861.

13081

NOV 18



RESTATE OF THE UNITED STATES

OFFICE OF THE SECRETARY OF THE INTERIOR

DEPARTMENT OF THE INTERIOR

13081

RECEIVED

RECEIVED

RECEIVED

RECEIVED

RECEIVED

RECEIVED

RECEIVED

RECEIVED

RECEIVED

RECEIVED

13081

INDEX

TO

THE EXECUTIVE DOCUMENTS

OF

THE SENATE OF THE UNITED STATES.

Subject.	Vol.	No.	Page.
A.			
Academy at West Point, New York. Report of the Board of Visitors at the United States Military.....	2	1	274
Academy at Annapolis, Maryland. Report of the Board of Officers appointed to witness the examination of the acting midshipmen, &c., at the Naval.....	3	1	27
Adjutant General of the Army, on the operations of the army during the year 1860. Annual report of the.....	2	1	18
African slave trade. (See <i>Slave Trade</i> .)			
Agricultural Bureau. Remarks of the Secretary of the Interior in relation to the operations of the.....	1	1	39
Almanac for the year 1860. Report of the condition and progress of the American Ephemeris and Nautical.....	3	1	223
American vessels. (See <i>Vessels</i> .)			
Anderson, a man of color, and fugitive from justice, who fled from the State of Missouri to Canada. Correspondence relating to the extradition of John, <i>alias</i> "Jack,".....	4	11	1
Appropriations, expenditures, and balances. Comptroller's annual statement of.....	3	1	405
Appropriations for the Navy Department under the act of May 1, 1820, for the year ending June 30, 1860. Statement of.....	3	1	406
Argentine Confederation. (See <i>Commerce and Navigation—Commercial Relations</i> .)			
Armament of each of the steam screw ships of the Navy. Statement of the cost of.....	4	4	29
Armory at Springfield in 1860. Report of the operations of the United States.....	2	1	970
Armory at Harper's Ferry in 1860. Report of the operations of the United States.....	2	1	972
Arms, &c., among the several States for the years 1860, under acts of 1808 and 1835. Statement exhibiting the apportionment of.....	2	1	967
Army department of the West for 1860. Report of the operations of the.....	2	1	13 193
Army department of Texas for 1860. Report of the operations of the.....	2	1	18 193
Army department of New Mexico for 1860. Report of the operations of the.....	2	1	51 199
Army department of Utah for 1860. Report of the operations of the.....	2	1	69 205
Army department of California for 1860. Report of the operations of the.....	2	1	107 206

Subject.	Vol.	No.	Page.
Army department of Oregon for 1860. Report of the operations of the	2	1	{ 117
Army during the year 1860. Annual report of the Adjutant General			{ 207
on the operations of the.....	2	1	189
Army of the United States on June 30, 1860. Statement exhibiting	2	1	{ 208
the organization and actual strength of the regular.....			
Army departments of the East, the West, Texas, New Mexico, Utah,			{ 210
Oregon, and California, on June 30, 1860. Statements of the	2	1	214
position and distribution of the troops in the.....			
Army from July 1, 1859, to June 30, 1860. Statement of the whole	2	1	230
number of recruits enlisted in the.....			
Army for the fiscal year ending June 30, 1860. Annual report of the	2	1	233
Quartermaster General of the.....			
Army for 1860. Annual report of the Paymaster General of the.....	2	1	238
Army for 1860. Annual report of the Commissary General of the.....	2	1	237
Army for 1860. Annual report of the Surgeon General of the.....	2	1	241
Army pensions in the hands of each agent on June 30, 1860. State-			
ment of the amount of funds for paying.....	1	1	478
Arsenal for 1860. Report of the operations at the Watervliet.....	2	1	975
Arsenal for 1860. Report of the operations at the Alleghany.....	2	1	977
Arsenal for 1860. Report of the operations at the Washington.....	2	1	979
Arsenal for 1860. Report of the operations at the Monroe.....	2	1	980
Arsenal for 1860. Report of the operations at the St. Louis.....	2	1	982
Arsenal for 1860. Report of the operations at the Frankfort.....	2	1	984
Arsenal for 1860. Report of the operations at the New York.....	2	1	985
Arsenal for 1860. Report of the operations at the Benicia.....	2	1	987
Arsenal for 1860. Report of the operations at the North Carolina.....	2	1	989
Arsenal for 1860. Report of the operations at the Watertown.....	2	1	990
Arsenal for 1860. Report of the operations at the Charleston.....	2	1	993
Arsenal for 1860. Report of the operations at the Texas.....	2	1	994
Arsenal for 1860. Report of the operations at the Mount Vernon.....	2	1	994
Arsenal for 1860. Report of the operations at the Baton Rouge.....	2	1	995
Arsenal site at Vancouver Depot. Report of the operations at the.....	2	1	996
Arts and manufactures for the year 1860, (Part I.) Annual report of			
the Commissioner of Patents in relation to.....	5	7	1
Arts and manufactures for the year 1860, (Part II,) being plates, illus-			
trating inventions, &c. Annual report of the Commissioner of			
Patents in relation to.....	6	7	863
Astronomical expedition on the coast of Chili. Report of the progress			
made in the.....	3	1	49
Auditor of the Treasury for the Post Office Department for the fiscal			
year ending June 30, 1860, showing the revenue account of said			
department. Report of the.....	3	1	524
Austria and other continental powers of Europe. Views of the Presi-			
dent on the relations between the United States and.....	1	1	18
Austria, commercial relations, &c. (See <i>Commercial Relations</i> and			
<i>Commerce and Navigation</i> .)			
Aves or Bird Island, claimed by Venezuela, adversely to the claim of			
the United States. Correspondence in relation to Shelton's			
alias.....	4	10	1
(For list of documents accompanying the above see page 2 of same.)			
B.			
Behring's Straits Naval Expeditions. Reports of the North Pacific and	3	1	{ 44
			{ to
			{ 48
Belgian mails. (See <i>Mails</i> .)			
Belgium. Copy of the postal convention between the United States			
and the kingdom of.....	3	1	454
Belgium, commercial relations, &c. (See <i>Commercial Relations</i> and			
<i>Commerce and Navigation</i> .)			
Bird Island. (See <i>Aves Island</i> .)			
Bolivia. (See <i>Commercial Relations</i> and <i>Commerce and Navigation</i> .)			

Subject.	Vol.	No.	Page.
Boundary lines between the territories of the United States and Texas, and also the territories of the United States and California. Remarks of the Secretary of the Interior in relation to the survey of the.....	1	1	47
Brazil. Views of the President on the relations between the United States and	1	1	19
Brazil. (See <i>Commerce and Navigation</i> and <i>Commercial Relations</i> .)			
Bremen mails. (See <i>Mails</i> .)			
Bremen. Copy of the additional articles to the postal convention between the United States and the Hanseatic republic of.....	3	1	{ 486 to 487
British mails. (See <i>Mails</i> .)			
British dominions. (See <i>Commercial Relations</i> and <i>Commerce and Navigation</i> .)			
Buildings, with a compendium of the same. Annual report of the Commissioner of Public	1	1	483
Bureau of Engineers for 1860. Annual report of the	2	1	253
Bureau of Yards and Docks for 1860. Report, with detailed estimates, &c., of the.....	3	1	55
Bureau of Ordnance and Hydrography for 1860. Report, with detailed estimates, &c., of the.....	3	1	206
Bureau of Construction, Equipment, and Repairs. Report, with detailed estimates, of the	3	1	230
Bureau of Provisions and Clothing. Report, with detailed estimates, of the	3	1	346
Bureau of Medicine and Surgery. Report, with detailed estimates, of the.....	3	1	371
C.			
California claims. Remarks of the President on the saving to the government of large amounts by the Attorney General's resistance to certain	1	1	27
Canal. Report in relation to the Atrato route of the interoceanic ship... ..	2	1	297
Canal near the isthmus of Darien. Report of Lieutenant Michler of a survey for an interoceanic ship.....	7	9	1
Capitol extension in 1860. Report of Captain Franklin on the operations of the United States.....	2	1	172
Capitol dome in 1860. Report of Captain Franklin on the operations of the new	2	1	178
Carriers. (See <i>Post Office</i> .)			
Census. Remarks of the Secretary of the Interior in relation to the eighth	1	1	40
Census. Report of the Superintendent of the	1	1	501
Charleston, South Carolina. Correspondence between Mr. Black, Secretary of State, and the legations of Bremen, England, and Spain, in regard to foreign vessels in the port of.....	4	5	1
Charts to be prepared for engraving and printing, and the expenses to be incurred in the reduction of the results of the surveys, &c. Report, with a list in detail, of the.....	3	1	45
Chili. (See <i>Commerce and Navigation</i> .)			
Chili, of the progress made during the year, and the present condition, &c., of the work under his charge. Report of the expedition to	3	1	49
China. (See <i>Commercial Relations</i> and <i>Commerce and Navigation</i> .)			
China. Views of the President on the relations between the United States and the empire of.....	1	1	18
China. Report of the survey of the route from San Francisco to	3	1	50
Chiriqui surveying expedition. Report of the progress made in the....	3	1	36
Circuit court. (See <i>Court</i> .)			
Clerks and watchmen at the naval stations, on board of vessels of war, &c. Statement of the number of.....	4	8	2
Clerks and other officers in the War Department during the year 1860. Report of the number of	4	12	2

Subject.	Vol.	No.	Page.
Coal beds in the Changanola river. Report on the location, quality, and quantity of coal in the.....	3	1	37 to 43
Coal for the use of steam vessels in the navy. Estimate of the quantity of			
Coal for the navy for the year ending June 30, 1861. Statement of offers to furnish anthracite	1	1	242
Cod fisheries. (See <i>Fisheries</i> .)	3	1	243
Columbia Institution for the Deaf and Dumb and the Blind for the District of Columbia. Report of the board of directors for the...	1	1	552
Commerce and navigation of the United States with the British dominions, (Part II.) Statement of the.....	9	6	43
Commerce and navigation of the United States with the French dominions, (Part II.) Statement of the.....	9	6	82
Commerce and navigation of the United States with the Spanish dominions, (Part II.) Statement of the.....	9	6	95
Commerce and navigation of the United States with the Portuguese dominions, (Part II.) Statement of the	9	6	134
Commerce and navigation of the United States with Belgium, (Part II.) Statement of the	9	6	138
Commerce and navigation of the United States with the dominions of the Netherlands, (Part II.) Statement of the	9	6	141
Commerce and navigation of the United States with the Hanse Towns, (Part II.) Statement of the	9	6	148
Commerce and navigation of the United States with the Danish dominions, (Part II.) Statement of the.....	9	6	156
Commerce and navigation of the United States with Sweden and Norway, (Part II.) Statement of the.....	9	6	158
Commerce and navigation of the United States with Russia, (Part II.) Statement of the.....	8	6	159
Commerce and navigation of the United States with Prussia, (Part II.) Statement of the.....	9	6	160
Commerce and navigation of the United States with Austria, (Part II.) Statement of the.....	9	6	160
Commerce and navigation of the United States with Sardinia, (Part II.) Statement of the	9	6	162
Commerce and navigation of the United States with Tuscany, (Part II.) Statement of the	9	6	164
Commerce and navigation of the United States with the Two Sicilies, (Part II.) Statement of the.....	9	6	165
Commerce and navigation of the United States with Turkey, (Part II.) Statement of the.....	9	6	169
Commerce and navigation of the United States with the Ionian Isles, (Part II.) Statement of the	9	6	170
Commerce and navigation of the United States with Liberia, (Part II.) Statement of the.....	9	6	171
Commerce and navigation of the United States with Muscat, (Part II.) Statement of the.....	9	6	172
Commerce and navigation of the United States with Siam, (Part II.) Statement of the.....	9	6	173
Commerce and navigation of the United States with China, (Part II.) Statement of the.....	9	6	175
Commerce and navigation of the United States with Japan, (Part II.) Statement of the.....	9	6	182
Commerce and navigation of the United States with the Sandwich Islands, (Part II.) Statement of the	9	6	188
Commerce and navigation of the United States with the Friendly Islands, (Part II.) Statement of the	9	6	189
Commerce and navigation of the United States with the Dominican Republic, (Part II.) Statement of the.....	9	6	190
Commerce and navigation of the United States with Hayti, (Part II.) Statement of the.....	9	6	193
Commerce and navigation of the United States with Mexico, (Part II.) Statement of the.....	9	6	195
Commerce and navigation of the United States with Honduras, (Part II.) Statement of the	9	6	199

Subject.	Vol.	No.	Page.
Commerce and navigation of the United States with Nicaragua, (Part II.) Statement of the	9	6	199
Commerce and navigation of the United States with New Granada, (Part II.) Statement of the	9	6	200
Commerce and navigation of the United States with Venezuela, (Part II.) Statement of the	9	6	209
Commerce and navigation of the United States with Ecuador, (Part II.) Statement of the	9	6	210
Commerce and navigation of the United States with Brazil, (Part II.) Statement of the	9	6	217
Commerce and navigation of the United States with Peru, (Part II.) Statement of the	9	6	224
Commerce and navigation of the United States with Chili, (Part II.) Statement of the	9	6	227
Commerce and navigation of the United States with Bolivia, (Part II.) Statement of the	9	6	229
Commerce and navigation of the United States with the Argentine Confederation, (Part II.) Statement of the	9	6	229
Commerce and navigation of the United States with Uruguay, (Part II.) Statement of the	9	6	232
Commercial relations of the United States with the British Dominions, (Part I.) Statement of the	9	6	3
Commercial relations of the United States with the French Dominions, (Part I.) Statement of the	9	6	93
Commercial relations of the United States with the Spanish Dominions, (Part I.) Statement of the	9	6	159
Commercial relations of the United States with the Portuguese Dominions, (Part I.) Statement of the	9	6	207
Commercial relations of the United States with Holland and its possessions, (Part I.) Statement of the	9	6	232
Commercial relations of the United States with Belgium, (Part I.) Statement of the	9	6	242
Commercial relations of the United States with Denmark and its possessions, (Part I.) Statement of the	9	6	252
Commercial relations of the United States with Sweden and Norway, (Part I.) Statement of the	9	6	254
Commercial relations of the United States with Russia, (Part I.) Statement of the	9	6	259
Commercial relations of the United States with Austria, (Part I.) Statement of the	9	6	306
Commercial relations of the United States with the States of the Zollverein, (Part I.) Statement of the	9	6	324
Commercial relations of the United States with Saxony, (Part I.) Statement of the	9	6	329
Commercial relations of the United States with the Hanse Towns, (Part I.) Statement of the	9	6	355
Commercial relations of the United States with Switzerland, (Part I.) Statement of the	9	6	376
Commercial relations of the United States with the Italian States, (Part I.) Statement of the	9	6	386
Commercial relations of the United States with the Turkish Dominions, (Part I.) Statement of the	9	6	390
Commercial relations of the United States with Japan, (Part I.) Statement of the	9	6	395
Commercial relations of the United States with Siam, (Part I.) Statement of the	9	6	408
Commercial relations of the United States with the Sandwich Islands, (Part I.) Statement of the	9	6	430
Commercial relations of the United States with the Feejee Islands, (Part I.) Statement of the	9	6	446
Commercial relations of the United States with the Dominican Republic, (Part I.) Statement of the	9	6	447
Commercial relations of Mexico, (Part I.) Statement of the	9	6	448
Commercial relations of the United States with Nicaragua, (Part I.) Statement of the	9	6	456

Subject.	Vol.	No.	Page.
Commercial relations of the United States with Costa Rica, (Part I.) Statement of the.....	9	6	458
Commercial relations of the United States with New Granada, (Part I.) Statement of the.....	9	6	459
Commercial relations of the United States with Venezuela, (Part I.) Statement of the.....	9	6	461
Commercial relations of the United States with Ecuador, (Part I.) Statement of the.....	9	6	464
Commercial relations of the United States with Bolivia, (Part I.) Statement of the.....	9	6	465
Commercial relations of the United States with Brazil, (Part I.) State- ment of the	9	6	467
Commercial relations of the United States with Peru, (Part I.) State- ment of the	9	6	482
Commercial relations of the United States with the Argentine Confed- eration, (Part I) Statement of the.....	9	6	488
Commercial relations of the United States with Paraguay, (Part I.) Statement of the.....	9	6	489
Commercial relations of the United States with foreign nations for the year ending September 30, 1860, (Parts I and II, in one volume, quarto.) Annual report of the Secretary of State of the.....	9	6	1
Commerce of each State and territory, exhibiting the value of exports of American and foreign produce in American and foreign ves- sels, and of imports in American and foreign vessels, during the year ending June 30, 1860, (Commerce and Navigation Report.) Statement of the.....	8	.....	552
Commerce and navigation of the United States for the year ending June 30, 1860, (Com. and Nav. Report.) Report of the.....	8	.....	1
<i>(See alliterated index and index to general statements of the above, at pages 677 and 684 of same.)</i>			
Commerce of the United States, exhibiting the value of exports to and imports from each foreign country, and the tonnage of American and foreign vessels arriving from and departing to each foreign country, during the year ending June 30, 1860, (Commerce and Navigation Report.) Statistical view of the.....	8	.....	548
Commissary General of the Army for 1860. Annual report of the.....	2	1	237
Commissioner of the General Land Office on the operations of his office during the year 1860 within the States of Ohio, Indiana, Michi- gan, Illinois, Wisconsin, Iowa, California, Oregon, Minnesota, Florida, Alabama, Mississippi, Louisiana, Arkansas, Missouri, and the Territories of Kansas, Nebraska, Minnesota, (known as Dakota,) Washington, New Mexico, and Utah. Annual report of the.....	1	1	49
Commissioner of Indian Affairs for 1860. Annual report of the	1	1	235
<i>(For list of documents accompanying the above report see page 251 of same.)</i>			
Commissioner of Pensions. Annual report of the operations of the office of.....	1	1	467
Commissioner of Public Buildings, with a compendium thereof. An- nual report of the.....	1	1	483
Commissioner of Patents, on the operations of his office in relation to arts and manufactures for the year 1860, (Part I.) Annual re- port of the.....	5	7	1
Commissioner of Patents, on the operations of the Patent Office in re- lation to arts and sciences, for the year 1860, (Part 2.) Annual report of the.....	6	7	1
<i>(For report of Commissioner of Patents on agriculture, see Ho. of Reps. documents.)</i>			
Congress to coerce a seceding State into submission to the authority of the general government. Views of the President in relation to the power of.....	1	1	11
Congressional Representatives on the same day. Recommendation by the President for the passage of a law requiring the election of all the.....	1	1	25
Construction, Equipment, and Repair. Annual report with estimates of the Bureau of.....	3	1	230

Subject.	Vol.	No.	Page.
Consular returns of the commerce and navigation of the United States with foreign countries for the year ending September 30, 1860, (Part II.) Statements of.....	9	6	1
Contingent. (See <i>Expenses</i> .)			
Contracts made by Bureau of Provisions and Clothing for the Navy Department for "supplies for the Navy" during the year ending June 30, 1861, under acts of 1808 and 1809. Statements of	3	1	367
Contracts for supplying materials for the Navy, under the cognizance of the Bureau of Construction, Equipment, and Repair, with the names of contractors, articles furnished, prices thereof, and where deliverable. List of.....	3	1	266
Costa Rica. Views of the President on the condition of the claims of American citizens on the government of.....	1	1	19
Costa Rica. (See <i>Commercial relations</i> .)			
Court of the United States, in the case of the United States vs. Kochersperger, in relation to the conveyance and delivery of letters by private individuals. Opinion of the circuit.....	3	1	507
Cruise of the naval practice-ship Plymouth by Commander Craven. Report of the summer's.....	3	1	28
D.			
Danish dominions. (See <i>Commerce and Navigation</i> .)			
Dead letters containing money and articles of value registered and sent out from the General Post Office Department during the year ending June 30, 1860.....	3	1	425
Dead letters containing money, and those containing articles of value other than money, registered and sent out for delivery to the owners and writers thereof. Statements of the number of.....	3	1	498
Deaf and Dumb and the Blind in the District of Columbia. Report of the Board of Directors of the Institution for the.....	1	1	552
Deaths, &c., in the Navy. (See <i>Navy</i> .)			
Defenses. (See <i>Fortifications</i> .)			
Delaware, Maryland, and Ohio. Statement of mail service in the States of New Jersey, Pennsylvania.....	3	1	493
Denmark. (See <i>Commercial Relations</i> and <i>Commerce and Navigation</i> .)			
Departments of the Treasury, War, Navy, General Post Office, and Attorney General's Office. Remarks and recommendations of the President in relation to the reports of the.....	1	1	27
Dismissions, &c., in the Navy. (See <i>Navy</i> .)			
District of Columbia to the favorable regard of Congress. Remarks of the President commending the interests of the people of the.....	1	1	28
District of Columbia. Remarks of the Secretary of the Interior in relation to the public buildings, institutions, grounds, &c., in the	1	1	45
District of Columbia. Report with plans and estimates for a new jail for the	1	1	499
District of Columbia. Report of the Inspectors, Warden, &c., of the Penitentiary of the United States for the.....	1	1	505
Dome. (See <i>Capitol</i> .)			
Dominican Republic. (See <i>Commercial Relations</i> and <i>Commerce and Navigation</i> .)			
Drop letters. Report relating to a modification of the act levying postage on.....	3	1	443
E.			
Ecuador. (See <i>Commercial Relations</i> and <i>Commerce and Navigation</i> .)			
Eighth census. (See <i>Census</i> .)			
Election of Congressional representatives throughout all the States on a day certain previous to the 4th of March in each odd year. Recommendation of the President for the passage of a law for the	1	1	25
Engineer of the Potomac water-works. Report of the.....	1	1	564
Engineer Bureau for 1860. Annual report of the.....	2	1	253

Subject.	Vol.	No.	Page.
England, in relation to the extradition of John <i>alias</i> Jack Anderson, a man of color, who was charged with murder in the State of Missouri, and fled to Canada. Correspondence between Mr. Cass, late, and Mr. Black, present, Secretary of State, and Mr. Dallas, American minister at London, and Lord Lyon, minister from.....	4	11	1
Enrolled tonnage. (See <i>Tonnage</i> .)			
Estimates of appropriations for salaries and contingent expenses for the General Land Office during the fiscal year ending June 30, 1862.....	1	1	100
Estimate of appropriations for the surveying department of the General Land Office, and for the surveying of the public lands.....	1	1	103
Estimates for fortifications now existing, or in course of construction, for the fiscal year ending June 30, 1862.....	2	1	271
Estimates for repairing and completing the several works for lake harbor improvements, under the superintendence of Colonel Graham, of the Topographical Engineers.....	2	1	549
Estimates of the office of Secretary of the Navy and the Southwest Executive Building.....	3	1	52
Estimates, &c., of the Bureau of Yards and Docks.....	3	1	55
Estimates, &c., of the Bureau of Ordnance and Hydrography.....	3	1	206
Estimates, &c., of the Bureau of Construction, Equipment, and Repairs	3	1	230
Estimates, &c., of the Bureau of Provisions and Clothing.....	3	1	346
Estimates, &c., of the Bureau of Medicine and Surgery.....	3	1	371
Estimates of the Paymaster and Quartermaster of the Marine Corps....	3	1	379
Estimate (civil) of the office of Secretary of the Navy and Bureaus of the Navy Department.....	3	1	380
Estimate (general) of the Southwest Executive Building.....	3	1	382
Estimate (summary) of the Navy.....	3	1	398
Estimate (general) of the Navy proper	3	1	399
Estimate (general) of the Marine Corps.....	3	1	402
Estimate (general) for special objects under the control of the Navy Department.....	3	1	403
Estimates for repair and maintenance for vessels afloat and in ordinary. Detail of.....	3	1	404
Estimates of the amount required for the expenditures under the head of "enumerated contingent" for the years ending June 30, 1861 and 1862.....	3	1	241
Estimates for pay of commission, warrant, and petty officers, seamen, engineer corps of the Navy, required for vessels proposed to be kept in commission, including receiving vessels, for the year ending June 30, 1862.....	3	1	233
Estimates for expenditures of Bureau of Construction, Equipment, and Repair for the year ending June 30, 1862.....	3	1	232
Estimates for wear and tear of vessels in commission, including fuel for steamers, and the purchase of hemp for the Navy, for the year ending June 30, 1862.....	3	1	231
Estimates for Navy Department under the control of the Bureau of Construction, Equipment, and Repairs, for the year ending June 30, 1862.....	3	1	232
Estimate for provisions, general and contingent expenses, under the cognizance of the Bureau of Provisions and Clothing of the Navy	3	1	232
Estimate of expenses of the Bureau of Provisions and Clothing for the year ending June 30, 1862.....	3	1	232
Estimate from the Bureau of Provisions and Clothing for that portion of the naval service coming under its cognizance for the year ending June 30, 1862.....	3	1	234
Estimate for the sum which will be required for the Navy, under the head of "contingent," for the fiscal year ending June 30, 1862...	3	1	234
Estimates for pay and subsistence of officers, non-commissioned officers, &c., of United States Marine Corps for the year ending June 30, 1862.....	3	1	348
	3	1	349
	3	1	349
	3	1	350
	3	1	387

Subject.	Vol.	No.	Page.
Estimate for the Quartermaster's Department for the year ending June 30, 1862	3	1	389
Estimates of receipts and expenditures of the General Post Office for the year 1862.....	3	1	422
Estimate for the transportation of foreign mails for 1862.....	3	1	423
Executive building. (See <i>Estimates</i> .)			
Expedition. Report of the progress, &c., made by Captain Engle, Lieutenants Jeffers and Morton, in the Chiriqui.....	3	1	36
Expedition to Behring's Straits. Report of Captain Ringgolds'.....	3	1	44
Expedition to Behring's Straits under his charge. Report of Captain Rogers'.....	3	1	48
Expedition and survey of the route from San Francisco to China. Report of the	3	1	50
Expedition to Chili, &c. Report of Lieutenant Gilliss's	3	1	49
Expenditures and balances. Statement of navy appropriations.....	3	1	405
Expenditures under the head of "contingent expenses of the Navy." Statement of	3	1	{ 240 410
Expenditures of the Post Office Department for the year ending June 30, 1860. Statement of receipts and.....	3	1	{ 538 539
Expenditures of the Post Office Department in each State and Territory during the year ending June 30, 1860. Statement of receipts and.....	3	1	540
Expenditures during the year ending June 30, 1860, and the value of all stores on hand at the several navy yards on the 1st July, 1860. Statement of receipts and.....	3	1	239
Explorations and surveys of the San Juan and Yellow Stone rivers and the military road from Fort Benton and Fort Walla-Walla. Report of.....	2	1	146
Explorations and surveys in Utah, California, and Oregon. Report in relation to.....	2	1	297
Exported, and whither exported, during the year ending June 30, 1860. (Commerce and Navigation Report.) General and summary statements of goods, wares, and merchandise of the growth, produce, and manufacture of the United States	8	.....	{ 8 54
Exported from the United States, and whither exported, during the year ending June 30, 1860. (Commerce and Navigation Report.) General and summary statements of goods, wares, and merchandise of the growth, produce, and manufacture of foreign countries.....	8	.....	{ 58 160
Exported from each collection district during the year ending June 30, 1860. (Commerce and Navigation Report.) General statement of the quantity and value of goods, wares, and merchandise of the growth, produce, and manufacture of the United States.....	8	.....	308
Exports to and imports from each foreign country, and the tonnage of American and foreign vessels arriving from and departing for each foreign country during the year ending June 30, 1860. (Commerce and Navigation Report.) Statistical view of the commerce of the United States, exhibiting the value of.....	8	.....	548
Exports of American and foreign produce in American and foreign vessels, and of imports in American and foreign vessels during the year ending June 30, 1860. (Commerce and Navigation Report.) Statement of the commerce of each State exhibiting the value of.....	8	.....	552
Expresses. Opinion of the circuit court of the United States in relation to private mail.....	3	1	507
Extension of the Capitol. (See <i>Capitol</i> .)			
Extension of the General Post Office. (See <i>Post Office</i> .)			
Extradition of John, <i>alias</i> Jack Anderson, a man of color and fugitive from justice who fled to Canada Correspondence relating to the.....	4	11	1
F.			
Feejee Islands. (See <i>Commercial Relations</i> .)			
Financial affairs of the country. Remarks of the President on the	1	1	23

Subject.	Vol.	No.	Page.
Fisheries from 1815 to 1860, inclusive. (Commerce and Navigation Report.) Comparative view of the registered and enrolled tonnage employed in the whale fishery; also, the proportion of the enrolled and licensed tonnage employed in the coasting trade, cod, mackerel, and whale.....	8	.....	670
Foreign nations for the year ending September 30, 1860, (Parts I and II, in one volume, quarto.) Report of the Commercial Relations of the United States with.....	9	6	1
Foreign stations. (See <i>Naval Depots</i> .)			
Foreign mail service. (See <i>Mails</i> .)			
Foreign vessels. (See <i>Vessels</i> .)			
Fort Wayne, Detroit, Michigan. Report on the condition, &c.....	2	1	254
Fort Porter, Black Rock, near Buffalo, New York. Report on the condition, &c., of.....	2	1	254
Fort Niagara, mouth of Niagara river, New York. Report on the condition, &c., of.....	2	1	254
Fort Ontario, Oswego, New York. Report on the condition, &c., of...	2	1	254
Fort Montgomery, Rouse's Point, New York. Report on the condition, &c., of.....	2	1	255
Fort George, on Hog Island Ledge, Portland Harbor, Maine. Report on the condition, &c., of.....	2	1	255
Fort Knox, narrows of the Penobscot river, Maine. Report on the condition, &c., of.....	2	1	255
Fort Warren, Boston harbor, Massachusetts. Report on the condition, &c., of.....	2	1	256
Fort Winthrop, Boston harbor, Massachusetts. Report on the condition, &c., of.....	2	1	256
Fort Independence, Boston harbor, Massachusetts. Report on the condition, &c., of.....	2	4	256
Fortifications at the entrance of New Bedford harbor, Massachusetts. Report on the condition, &c., of the.....	2	1	257
Fort Adams, Newport harbor, Rhode Island. Report on the condition, &c., of.....	2	1	257
Fort Griswold, New London harbor, Connecticut. Report on the condition, &c., of.....	2	1	257
Fort Trumbull, New London harbor, Connecticut. Report on the condition, &c., of.....	2	1	257
Fort Schuyler, eastern entrance to New York harbor, New York. Report on the condition, &c., of.....	2	1	258
Fort at Willett's Point, eastern entrance of New York harbor, New York. Report on the condition, &c., of the.....	2	1	258
Fort Columbus, at Castle Williams, New York harbor, New York. Report on the condition, &c., of.....	2	1	258
Fort Wood, New York harbor, New York. Report on the condition, &c., of.....	2	1	259
Fort Hamilton, New York harbor, New York. Report on the condition, &c., and the new battery at.....	2	1	259
Fort Richmond, New York harbor, New York. Report on the condition, &c., of.....	2	1	259
Fort on the site of Fort Tompkins, New York harbor, New York. Report on the condition, &c., of.....	2	1	260
Fort at Sandy Hook, New Jersey. Report on the condition, &c., of the.....	2	1	260
Fort Mifflin, Delaware river, Pennsylvania. Report on the condition, &c., of.....	2	1	261
Fort Delaware, Delaware river, Delaware. Report on the condition, &c., of.....	2	1	261
Fort Carroll, Baltimore harbor, Maryland. Report on the condition, &c., of.....	2	1	261
Fort Monroe, Old Point Comfort, Virginia. Report on the condition, &c., of.....	2	1	262
Fort Calhoun, Hampton roads, Virginia. Report on the condition, &c., of.....	2	1	262
Fort Macon, Beaufort harbor, North Carolina. Report on the condition, &c., and the preservation of the site of.....	2	1	263

Subject.	Vol.	No.	Page.
Fort Caswell, mouth of Cape Fear river, North Carolina. Report on the condition, &c., and the preservation of the site of.....	2	1	263
Fort Moultrie, Charleston harbor, South Carolina. Report on the condition, repairs, and preservation of the site of	2	1	264
Fort Sumter, Charleston harbor, South Carolina. Report on the condition, &c., of.....	2	1	264
Fortifications of Castle Pinckney, Charleston harbor, South Carolina. Report on the condition and repairs of the	2	1	264
Fort Pulaski, Savannah river, Georgia. Report on the condition, &c., of	2	1	264
Fort Jackson, Savannah river, Georgia. Report on the condition and repairs of	2	1	265
Fort Clinch, Amelia island, Florida. Report on the condition, &c., of	2	1	265
Fort Taylor, Key West, Florida. Report on the condition, &c., of....	2	1	265
Fort Jefferson, Garden Key, Tortugas, Florida. Report on the condition, &c., of.....	2	1	266
Fort Pickins, Pensacola harbor, Florida. Report on the condition, &c., of	2	1	266
Fort Barrancas, Pensacola harbor, Florida. Report on the condition, &c., of	2	1	267
Fort McRae, Pensacola harbor, Florida. Report on the condition, &c., of	2	1	267
Fort Morgan, entrance to Mobile harbor, Alabama. Report on the condition, &c., of.....	2	1	267
Fort Gaines, Dauphin island, entrance to Mobile harbor, Alabama. Report on the condition, &c., of.....	2	1	267
Fort on Ship island, coast of Mississippi, Mississippi. Report on the condition, &c., of the.....	2	1	268
Fortifications for military defenses at Proctor's Landing, Louisiana. Report on the condition, &c., of the.....	2	1	268
Fort at St. Philip, Mississippi river, Louisiana. Report on the condition and repairs of	2	1	268
Fort Jackson, Mississippi river, Louisiana. Report of the condition, &c., of.....	2	1	269
Fortifications for the defense of the entrance to Galveston harbor, Texas. Report on the.....	2	1	269
Fort at Alcatraz Island, San Francisco harbor, California. Report on the condition, &c., of the.....	2	1	269
Fort at Fort Point, entrance of San Francisco harbor, California. Report on the condition, &c.....	2	1	270
Fortifications and military defenses at Forts Wayne, Porter, Niagara, Ontario, Montgomery, Hog Island Ledge, Knox, Warren, Winthrop, Independence, entrance of New Bedford harbor, Adams, Griswold, Trumbull, Schuyler, Willett's Point, Columbus, and Castle Williams, Wood, Hamilton, Richmond, Tompkins, Staten Island, Sandy Hook, Mifflin, Delaware, Carroll, Monroe, Calhoun, Macon, Caswell, Moultrie, Sumter, Castle Pinckney, Pulaski, Jackson, on the Savannah river, Clinch, Taylor, Jefferson, Pickens, Barrancas, McRae, Morgan, Gaines, on Ship Island, at Proctor's landing, St. Philip, Jackson, on the Mississippi river, at the entrance to Galveston harbor, at Alcatraz Island, and at Fort Point. Report of the Engineer Bureau in relation to forts.....	2	1	253
France. Views of the President on the relations between the government of the United States and.....	1	1	16
French mail. (See <i>Mails</i> .)			
French Dominions. (See <i>Commercial Relations and Commerce and Navigation</i> .)			
Friendly Islands. (See <i>Commerce and Navigation</i> .)			
G.			
Geographical positions of places determined from astronomical observations from 1819 to 1859, by Colonel Graham, of the corps of Topographical Engineers and his assistants. Tabular statement of.....	2	1	570

Subject.	Vol.	No.	Page.
Geological and mineralogical developments of the surveys of the public lands. Statement of.....	1	1	77
Great Britain, in relation to Honduras and Nicaragua, and the right of searching American vessels, and the controversy relating to the Island of San Juan, near Washington Territory. Views of the President setting forth the relations between the United States and	1	1	15
Great Britain and Ireland, in relation to the postal convention between the two governments. Copy of additional articles to the convention between the United States and the United Kingdom of...	3	1	453
H.			
Hamburg mails. (See <i>Mails</i> .)			
Hamburg. Copy of additional article to a postal convention between the United States and the Hanseatic Republic of.....	3	1	486
Hanseatic Republic of Bremen. (See <i>Bremen</i> .)			
Hanseatic Republic of Hamburg. (See <i>Hamburg</i> .)			
Hanse Towns. (See <i>Commercial Relations and Commerce and Navigation</i> .)			
Harbor improvements for 1860. Annual report of Colonel Graham of the corps of Topographical Engineers on the Lake.....	2	1	547
Harbor at Oswego, New York. Copy of an act of the legislature of New York to enable the owners of land in Oswego to enlarge the	2	1	959
Hayti. (See <i>Commerce and Navigation</i> .)			
Holland and its possessions. (See <i>Commercial Relations and Commerce and Navigation</i> .)			
Honduras. (See <i>Great Britain and Commerce and Navigation</i> .)			
Hospital for the Insane. Reports of the Superintendent, and Board of Visitors of the Government.....	1	1	530
Hospital fund on the 1st of July, 1860. Statement of the condition of the Navy.....	3	1	376
Hospital for the Insane, during the year ending September 30, 1860. Statement of operations of the Government.....	3	1	377
I.			
Imported into the United States, and from whence imported, during the year ending June 30, 1860. (Commerce and Navigation Report.) General statement of goods, wares, and merchandise, of the growth, produce, and manufacture of foreign countries...	8	.....	172
Imported into the United States in American and foreign vessels during the year ending June 30, 1860. (Commerce and Navigation Report.) Summary statement of the quantity and value of goods, wares, and merchandise.....	8	.....	294
Imported into each collection district of the United States during the year ending June 30, 1860. (Commerce and Navigation Report.) General statement of goods, wares, and merchandise of the growth, produce, and manufacture of foreign countries.....	8	.....	404
Imports from each foreign country during the year ending June 30, 1860, with the tonnage of American and foreign vessels arriving from and departing to each foreign country. (Commerce and Navigation Report.) Statistical view of the commerce of the United States, exhibiting the value of exports to and	8	.....	548
Imports in American and foreign vessels during the year ending June 30, 1860. (Commerce and Navigation Report.) Statement exhibiting the commerce of each State with the value of exports of American and foreign produce in American and foreign vessels, and of	8	.....	552
Imported, during the year ending June 30, 1860. (Commerce and Navigation Report.) General and summary statements exhibiting the indirect trade of the United States, the countries of production and of shipment, with the value of the articles.....	8	.....	{ 610 646

Subject.	Vol.	No.	Page.
Indian Affairs. Remarks of the Secretary of the Interior on the operations of the Indian Office, and the reports of the Commissioner of.....	1	1	34
Indian Affairs for 1860. Annual report of the Commissioner of.....	1	1	235
Indians in the State of New York. Report of Bela H. Colegrove, agent for the	1	1	255
Indians in the State of Michigan. Report of A. M. Fitch, agent for the.....	1	1	256
Indians in the vicinity of Green Bay. Report of the agency for the....	1	1	259
Indian superintendency. Report of the northern.....	1	1	266
Indian superintendency. Report of the central.....	1	1	304
Indian superintendency. Report of the southern.....	1	1	339
Indian superintendency. Report of A. Humphreys, agent for the Utah	1	1	393
Indian superintendency. Report of the Washington and Oregon.....	1	1	395
Indians' neutral land. Correspondence relative to the intruders upon the Cherokee.....	1	1	444
Indian agents, requiring prompt rendition of their accounts. Indian office circular to.....	1	1	451
Indians. Special report of Commissioner Greenwood relative to his visit to the Cheyenne and Arrapahoe.....	1	1	452
Indian agents of California. Official instructions to the newly appointed	1	1	454
Indian agents in California. Letters appointing John A. Dreibelbes and J. Y. McDuffie supervising.....	1	1	456
Indians for bounty land. Statement showing the action of the Indian Office relative to applications of.....	1	1	458
Indian trust fund. Report of G. Bailey, disbursing clerk, upon the....	1	1	459
Ionian Isles. (See <i>Commerce and Navigation</i> .)			
Infirmary. Annual report of the Resident Physician of the Washington	1	1	495
Insane in the District of Columbia. Reports of the Superintendent, Board of Visitors, &c., of the Government Hospital for the.....	1	1	530
Insane in the District of Columbia. Statement of the operations of the Government Hospital for the.....	3	1	377
Institution for the Deaf and Dumb and the Blind in the District of Columbia. Report of the Board of Directors for the.....	1	1	552
Interior, on the operations of the Interior Department during the year 1860. Annual report of the Secretary of the.....	1	1	29
Interoceanic ship canal. (See <i>Canal</i> .)			
Inventions. (See <i>Patents</i> .)			
Isthmus of Darien. Report of a survey by Lieut. Michler, for an interoceanic canal near the.....	7	9	1
Italian States. (See <i>Commercial Relations</i> .)			
J.			
Jail for the District of Columbia. Report of Edward Clark, architect, with plans and estimates for a new	1	1	499
Japan. Views of the President on the relations between the United States and.....	1	1	18
Japan. (See <i>Commercial Relations</i> and <i>Commerce and Navigation</i> .)			
Judicial expenses of the government. Remarks of the Secretary of the Interior in relation to the want of uniformity in the.....	1	1	41
K.			
Kansas. Views of the President in relation to proceedings in.....	1	1	21
Kansas to the favorable consideration of Congress. Recommendation by the President of the subject of the necessities of the people of.	1	1	28
L.			
Laboratory. (See <i>Naval Laboratory</i> .)			
Labor at the several United States navy-yards for the years 1840 and 1860. Comparative statement of the cost of mechanical.....	4	4	65

Subject.	Vol.	No.	Page.
Lake harbor works and steam dredges. Report in relation to	2	1	297
Lakes for 1860. Annual Report of the survey of the northern and northwestern	2	1	322
Lake harbor improvements for 1860. Annual Report of Colonel Graham on the	2	1	547
Lake Michigan. Report of the discovery, by Colonel Graham, of a lunar tidal wave on	2	1	584
Land surveys. (See <i>Surveys</i> .)			
Land Office, on the operations of his office during the year 1860. Annual Report of the Commissioner of the General	1	1	49
Lands. Remarks of the Secretary of the Interior on the Report of the Commissioner of Public	1	1	29
Lands at the Hot Springs in Arkansas. The Secretary of the Interior recommends the sale of the reserved	1	1	31
Lands granted to the State of Iowa, by act of 1846, for the improvement of the navigation of the Des Moines river. Remarks of the Secretary of the Interior in relation to the	1	1	31
Lands granted to the State of Wisconsin for the improvement of the Fox and Wisconsin rivers. Remarks of the Secretary of the Interior in relation to the	1	1	32
Lands in the Territory of Washington, by the Puget's Sound Agricultural Company. Remarks of the Secretary of the Interior on the Nisqually and Cowlitz claims to	1	1	33
Land in acres and in square miles contained in the several States and Territories. Statement of the area or quantity of	1	1	53
Lands proclaimed for sale during the five quarters ending September 30, 1860; and in California in October, 1860. Statement of the quantity of	1	1	63
Lands granted for railroads, under acts of 1856 and 1857, in the States of Alabama, Florida, Iowa, Louisiana, Michigan, Minnesota, Mississippi, and Wisconsin. Statement of	1	1	67
Lands granted for the improvement of Des Moines river and Rock River canal. Statement relating to	1	1	68
Land claims against the United States. Statements relating to Revolutionary bounty, war, and war of 1812, Virginia military and preëmption	1	1	69
Land Office for 1860. Abstract of the annual report of the Commissioner of the General	1	1	79
Lands under the act of 1854. Regulations concerning the graduation of the price of public	1	1	72
Land reservations for the Shawnee, Kaskaskia, Miami, Wyandotte, Sacs and Foxes, and Stockbridge Indians. Patents issued under certain treaty	1	1	75
Lands containing minerals. Report relating to the public	1	1	77
Land surveying operations from October 1, 1859, to September 30, 1860. Statement of	1	1	81
Land prepared for market and offered at public sale during the fiscal year ending June 30, 1859, and the quarter ending September 30, 1860. Exhibit of the quantities of public	1	1	82
Lands during the five quarters ending September 30, 1860. Table of sales and other disposals of the public	1	1	83
Lands selected and those approved under the acts of 1849 and 1850. Statement of the quantity of swamp	1	1	84, 85
Lands patented to the several States under the swamp land act of September 28, 1850. Statement of the quantity of	1	1	86
Land business under acts of 1847, 1850, 1852, and 1855. Statement showing the condition of the bounty	1	1	87
Lands during the first and last halves of the fiscal year ending June 30, 1860. Statements of sales of public	1	1	88, 94
Lands for 1860. Reports of the surveyors general of the public	1	1	107
Letters containing money and other articles of value registered and sent out from the General Post Office during the year ending June 30, 1860. Statement of the number of dead	3	1	425
Letters and the regulations of the penny post system. Report in relation to a modification of the law levying postage on drop	3	1	443
Letters. Report in relation to the unfavorable results of registering	3	1	445

Subject.	Vol.	No.	Page.
Letters by private express. Opinion of the circuit court of the United States in relation to carrying and delivery of	3	1	507
Letters and newspapers exchanged between the United States post offices and those of Great Britain, Prussia, France, Belgium, Bremen, and Hamburg, in 1860. Statement of.....	3	1	549
Liberia. (See <i>Commerce and Navigation</i> .)			
Lunar tidal wave in Lake Michigan. (See <i>Lake Michigan</i> .)			
M.			
Mackerel fishery. (See <i>Fisheries</i> .)			
Mails between the United States and Prussia during the year ending June 30, 1860. Receipts and disbursements in closed.....	3	1	553
Mail service by railroad, as in operation September 30, 1860, in the States of New Jersey, Pennsylvania, Delaware, Maryland, and Ohio. Statement of	3	1	494
Mail service by railroad, as in operation June 30, 1860, in the States of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Ohio, North Carolina, South Carolina, Georgia, Florida, Michigan, Indiana, Illinois, Wisconsin, Iowa, Missouri, Kentucky, Tennessee, Alabama, Mississippi, Arkansas, Louisiana, Texas, and California. Statement of.....	3	1	498
Mail service by steamboat, as in operation September 30, 1860, in the States of New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Maryland, Ohio, Virginia, North Carolina, South Carolina, Georgia, Florida, Michigan, Wisconsin, Iowa, Missouri, Minnesota, Kentucky, Tennessee, Alabama, Mississippi, Arkansas, Louisiana, Texas, California, Oregon, and Washington Territory. Statement of.....	3	1	511
Mail matter by private expresses. Opinion of the circuit court of the United States for the eastern district of Pennsylvania in the case of the United States vs. Kochersperger, in relation to the carriage and delivery of.....	3	1	507
Mails received in and sent from the United States during the year ending June 30, 1860. Statement of letter postage on British.....	3	1	544
Mails received in and sent from the United States during the year ending June 30, 1860. Statement of letter postage on Prussian..	3	1	545
Mails received in and sent from the United States from January 24 to June 30, 1860. Statement of letter postage on French.....	3	1	546
Mails received in and sent from the United States from January 24 to June 30, 1860. Statement of letter postage on Belgian.....	3	1	547
Mails received in and sent from the United States during the year ending June 30, 1860. Statement of letter postage on Bremen...	3	1	548
Mails received in and sent from the United States during the year ending June 30, 1860. Statement of letter postage on Hamburg.	3	1	548
Mails between the governments of Great Britain and Ireland and the United States. Copy of additional articles to the convention to regulate postages and the transmission of the.....	3	1	453
Mail service by railroad, steamboat, coach, and inferior modes, in the States of New Jersey, Pennsylvania, Delaware, Maryland, and Ohio. Statement of the annual transportation and cost of the....	3	1	493
Mail routes, mail contractors, route agents, local agents, and mail messengers at the close of the contract year ending June 30, 1860. Number of.....	3	1	491
Mail service for the year ending June 30, 1860. Tabular statement of.	3	1	489
Mail contractors, &c., in the years 1852 and 1860. Statement of the...	3	1	427
Mail service during the year ending June 30, 1860. Statement of foreign	3	1	{ 429 452
Mail service between the Atlantic and Pacific coasts for the year 1859-60. Statement of ocean.....	3	1	433
Mail service between San Antonio and San Diego. Statements relating to the.....	3	1	437
Mail service between Charleston, Savannah, and Key West. Report of.	3	1	437

Subject.	Vol.	No.	Page.
Mail service on the Mississippi river. Report of the.....	3	1	438
Mail service between New York and New Orleans. Report of.....	3	1	439
Mail service between New York and Boston. Report of.....	3	1	440
Mails on railroads. Report in relation to the irregularities of the transportation of the.....	3	1	440
Mail routes under act of May 16, 1860. Report in relation to the establishment of new.....	3	1	441
Mail matter. Report in relation to the prepayment of.....	3	1	441
Mails. Report in relation to the pennypost regulations and a modification of the law levying postage on "drop letters" sent through the.....	3	1	443
Manufactures. (See <i>Arts and Manufactures</i> .)			
Marine Corps. Report of the commandant with detailed estimates of the quartermaster and paymaster of the.....	3	1	382
Marine Corps, on the 31st October, 1860. General return of officers, &c., of the.....	3	1	383
Marine Corps, under advertisement of September 22, 1859. Schedule of bids and existing contracts for rations, clothing, &c., in the... }	3	1	{ 392 395
Marines in the United States service annually from 1840 to 1860. Estimate of the number of seamen and.....	4	4	30
Maryland and Ohio. Statement of mail service in the States of New Jersey, Pennsylvania, Delaware.....	3	1	493
Mechanical labor. (See <i>Labor</i> .)			
Medical corps of the Navy. (See <i>Navy</i> .)			
Medicine and Surgery. Annual report with estimates of the Bureau of.	3	1	371
Meteorological observations at various points on the northern and northwestern lakes. Tabular statements of.....	2	1	354
Mexico. Views of the President on the condition of the relations between the United States and.....	1	1	19
Mexico. (See <i>Commerce and Navigation and Commercial Relations</i> .)			
Midshipmen. (See <i>Academy</i> .)			
Military Academy at West Point, New York. (See <i>Academy</i> .)			
Military defenses. (See <i>Forts and Fortifications</i> .)			
Military roads. (See <i>Roads</i> .)			
Military expeditions against neighboring states at peace with the United States. Remarks of the President relative to setting on foot unlawful.....	1	1	24
Mullen and Colonel Wright, relative to the movement of troops overland to the northern portion of the Pacific, (No. 2, special session.) Communications from Major Steer and Lieutenant.....	4	.....	1
Muscat. (See <i>Commerce and Navigation</i> .)			
N.			
National defenses. (See <i>Fortifications</i> .)			
Nautical Almanac for 1860. Report of the progress and condition of the American Ephemeris and.....	3	1	223
Naval Academy at Annapolis, Maryland. Report of the board of officers appointed to witness the examination of acting midshipmen, and to examine into the state of the police, discipline, and general management of the.....	3	1	27
Naval practice-ship Plymouth. Report of the summer's cruise, by Commander Craven, of the.....	3	1	28
Naval surveying expedition. Preliminary reports of Captain Engle, chief; Lieutenant Jeffers, hydrographer; Lieutenant Morton, topographer; and Doctor Evans, geologist, of the Chiriqui.....	3	1	36
Naval expedition. Report of Captain Ringgold, of the progress made in reducing the notes, surveys, &c., made under his direction whilst in command of the North Pacific and Behring's Straits.....	3	1	44
Naval expedition under his charge. Report of Commander John Rodgers, of the progress made during the past year, and the present condition of the work of the North Pacific and Behring's Straits.....	3	1	48

Subject.	Vol.	No.	Page.
Naval astronomical expedition to Chili, of the progress made during the past year, and present condition, &c., of the work under his charge. Report of Lieutenant Gilliss, conductor of the late	3	1	49
Naval survey of the route from San Francisco to China. Report of Lieutenant Brooke, of the progress made in preparing his report of the	3	1	50
Naval depots on foreign stations, July 1, 1860. Statement of the value of provisions, clothing, &c., at the	3	1	351
Naval squadrons on foreign stations, during the year ending June 30, 1860. Statement of the value of shipments made by the Bureau of Provisions and Clothing to the United States	3	1	352
Naval stores at home and abroad, or otherwise destroyed, loss by leakage, evaporation, &c.; amount condemned, with the net proceeds of the sales thereof at auction, from July 1, 1859, to June 30, 1860. Statement of the cost of provisions, &c., condemned on board the national vessels and at the	3	1	353
Naval stores from Boston to Valparaiso, Chili, St. Paul de Loando, Africa, Hong Kong, China, and Key West, Florida. Statements of proposals received for the transportation of	3	1	{ 365 366
Naval stations within the United States, and from squadrons and vessels on separate service in commission on home and foreign stations, for the year ending December 31, 1859. Tabular statement of sick and disabled seamen at	3	1	372
Naval Hospital fund, July 1, 1860. Statement of the condition of the ..	3	1	376
Naval Hospital for the Insane, during the year ending September 30, 1860. Statement of the operations of the government	3	1	377
Naval Laboratory, on the 30th of June, 1860. Statement of the operations and condition of the	3	1	377
Naval stations and on board vessels-of-war, &c. Statement of the number and pay of clerks and watchmen at the	4	8	1
Navigation of the United States, during the year ending June 30, 1860. (Commerce and Navigation Report.) Statements of the commerce and	8	.....	1
(See <i>Alliterated index and index to general statements of the above, at pages 677 and 684 of same.</i>)			
Navigation of the United States with foreign governments, during the year ending September 30, 1860. Parts I and II, quarto. Report, with statements of the commerce and ..	9	6	1
(See <i>indexes to the above, at pages 7 and 9, Part I of same.</i>)			
Navy, with accompanying documents. Annual report of the Secretary of the	3	1	1
(For list of papers accompanying the above report, see page 21 of same.)			
Navy, in order to determine the expediency of converting them into efficient war steamers. Remarks of the Secretary of the Navy in relation to the appointment and proceedings of the board of officers for the examination of certain sailing vessels of the	3	1	32
Navy. Views of the Secretary of the Navy in relation to an increase of the Navy; the policy of suspending naval repairs; the importance of navy-yards and docks; the condition of the Naval Academy; the suppression of the African slave trade; the prohibition of the use of patented articles in the Navy by the act of 1860; the supplies of butter, cheese, flour, and tobacco, for the Navy; the condition of the Marine Corps; surgeons and paymasters; the squadron services; the Japanese embassy; the explorations of the Isthmus of Chiriqui, of the Parana and tributaries of the Paraguay river, of Behring's Straits; the astronomical expedition of Captain Gilliss to Chili; and the survey of the route, by Lieutenant Brooke, between San Francisco and China, with a notice of the estimates and expenditures for the support of the Marine Corps and the	3	1	4 to 20
Navy, since the last annual report. List of deaths, resignations, and dismissions in the	3	1	23
Navy, to ascertain the expediency of converting them into efficient war steamers. Report of the board of officers appointed to examine the sailing vessels of the	3	1	32

Subject.	Vol.	No.	Page.
Navy appropriations, expenditures, and balances. Comptroller's statement of.....	3	1	405
Navy Department. General estimate (civil) of the Secretary's office and Bureaus of the	3	1	298
Navy-yards, on the 1st of July, 1860. Statement of receipts and expenditures during the year ending June 30, 1860, and the value of the stores on hand at the several.....	3	1	239
Navy, at the several Navy-yards, under the advertisement of August 22, 1860. Tabular statements of scales of offers to supply materials for the.....	3	1	244 to 265
Navy-yards where deliverable. List of contracts to supply the Navy with materials, with the names of the contractors, date of contract, articles, prices thereof, and the respective.....	3	1	266
Navy-yards and at naval depots on foreign stations, July 1, 1860. Statement of the value of provisions, clothing, small stores, and contingent on hand at the United States.....	3	1	351
Navy supplies for the year ending June 30, 1860, under the advertisement of the Bureau of Provisions and Clothing. Statement of proposals received for.....	3	1	355
Navy, received under the advertisement of the Bureau of Provisions and Clothing, dated April 6, 1860. Abstract of proposals for clothing and clothing materials for the.....	3	1	359
Navy, under advertisement of the Bureau of Provisions and Clothing, of April 13, 1860. Abstract of proposals received for small stores for the.....	3	1	361
Navy, under advertisement of April 13, 1860. Abstract of proposals received for supplies of soap, candles, mustard seed, black pepper, bottles and corks, for the.....	3	1	362
Navy beef and pork for the year 1861, under advertisement of June 25, 1860. Abstract of proposals received for the supply of.....	3	1	363
Navy-yards during the year ending June 30, 1861. Abstract of proposals received for the supply of fresh beef and vegetables at the several.....	3	1	364
Navy, during the year ending June 30, 1861, under acts of Congress of April, 1808, and March, 1809. Statement of contracts for supplies for the	3	1	367
Navy. Statement of the operations and the necessity of an increase of the medical corps of the.....	3	1	377
Navy Department, for the year ending June 30, 1860, under the act of May 1, 1820. Statement of appropriations for the.....	3	1	406
Navy, as settled and allowed at the Fourth Auditor's Office, for the year ending June 30, 1860. Abstract of expenditures under the head of contingent expenses of the	3	1	410
Navy-yards from a per diem pay to salaries, with a statement of the pay received at each of the navy-yards. Report in relation to changing the compensation of master workmen at the several.....	4	13	1
Navy, communicating information in relation to the number and character of ships in commission, with their batteries, stations, and number of seamen and marines in service, and the amount expended for equipment and repair for each year, from 1840 to 1860, and other information relating to the comparative expenses of steam and sailing vessels, and the yearly support of each class thereof. Report of the Secretary of the.....	4	4	1
Navy. Statement of the actual cost per annum of maintaining in commission each class of steam vessels as compared with corresponding classes of sailing vessels of the.....	4	4	32
Navy, with tonnage and battery, including caliber and weight of broadside, and where built. Statement of the cost of each of the screw ships of the.....	4	4	54
Navy, as contrasted with the cost of provisions required for maintaining in commission sailing vessels of corresponding classes during each year from 1843 to 1860 inclusive. Statement of the cost of provisions required for maintaining in commission a steam frigate, a steam sloop-of-war of the first class, one of the second, and one of the third class, in the.....	4	4	16

Subject.	Vol.	No.	Page.
Navy-yards for 1840 and 1860. Comparative statement of the cost of mechanical labor at the several.....	4	4	65
Navy, communicating a statement of the number and pay of clerks and watchmen at the naval stations, on board of vessels of war, &c. Report of the Secretary of the.....	4	8	1
Navy, relative to changing the pay per diem of the master workmen at the several navy-yards to salaries. Report of the Secretary of the.....	4	13	1
Netherlands. (See <i>Commerce and Navigation</i> .)			
New Granada. (See <i>Commercial Relations—Commerce and Navigation</i> .)			
New Granada. Views of the President in relation to the exchange of the ratification of the treaty with the Republic of.....	1	1	19
New Jersey, Pennsylvania, Delaware, Maryland, and Ohio. Statement of mail service in	3	1	493
Nicaragua. (See <i>Great Britain—Commerce and Navigation—Commercial Relations</i> .)			
Newspapers and letters exchanged between the United States and England, Prussia, France, Belgium, Bremen, and Hamburg. Statement of the number of.....	3	1	549
Northern and northwestern lakes. (See <i>Lakes</i> .)			
North Pacific and Bhering's Straits naval expedition. (See <i>Naval Expedition</i> .)			
Norway and Sweden. (See <i>Commercial Relations and Commerce and Navigation</i> .)			
O.			
Ocean mails between the Pacific and Atlantic coasts. Remarks of the President in relation to the.....	1	1	27
Ocean steamers during the year ending June 30, 1860. Statement of letters and newspapers, with the several postages, conveyed by various lines of.....	3	1	554
Ocean steamers. Statement of closed mail account with the various lines of.....	3	1	552
Officers in the service of the Interior Department. Complimentary notice by the Secretary of the Interior of the fidelity of the several.....	1	1	48
Ohio. Statement of mail service in the States of New Jersey, Pennsylvania, Delaware, Maryland, and	3	1	493
Ordinance Office during the year 1860. Annual report of the operations of the.....	2	1	961
Ordinance and Hydrography. Annual report, with estimates, of the Bureau of.....	3	1	206
Oswego harbor. (See <i>Harbors</i> .)			
P.			
Pacific railroad. (See <i>Railroad</i> .)			
Paraguay. (See <i>Commercial Relations</i> .)			
Patent Office. Remarks of the Secretary of the Interior on the operations of the.....	1	1	39
Patents in relation to arts and manufactures for the year 1860, (Part 1.) Annual report of the Commissioner of.....	5	7	1
Patents in relation to arts and manufactures for the year 1860, (Plates, Part 2.) Annual report of the Commissioner of.....	6	7	863
(For report of Commissioner of Patents relating to Agriculture, see <i>Documents House of Representatives</i> .)			
Paymaster General of the Army for 1860. Annual report of the	2	1	238
Pennsylvania, Delaware, Maryland, and Ohio. Statement of mail service in the States of New Jersey.....	3	1	493
Pensions. Remarks of the Secretary of the Interior on the report of the Commissioner of.....	1	1	138
Pensions, with a synopsis of the same. Annual report of the Commissioner of.....	1	1	467
			469

Subject.	Vol.	No.	Page.
Pensions admitted in each State and Territory during the year ending June 30, 1860. Statement of the number and yearly amount of original applications for army.....	1	1	470
Pensions of the army admitted and payable at the date of issuing the pension certificate for the year ending June 30, 1860. Statement of the amount of arrears of.....	1	1	474
Pensions on the roll of the several States and Territories on June 30, 1860. Statement of the number and amount of army.....	1	1	476
Pensions at the several agencies in the States and Territories, during the year ending June 30, 1860. Statement of the amount paid for army.....	1	1	477
Pensions in the hands of each agent on June 30, 1860. Statement of the amount of funds for paying army.....	1	1	478
Pensions admitted during the year ending June 30, 1860. Statement of the number and yearly amount of original applications, and for increase of navy.....	1	1	479
Pensions during the fiscal year ending June 30, 1860. Statement of the amount paid at agencies for navy.....	1	1	480
Pensions payable at the agencies on June 30, 1860. Statement of the number and yearly amount of navy.....	1	1	481
Pension agents on June 30, 1860. Statement of the amount of funds in the hands of the several.....	1	1	482
Peru. (See <i>Commercial Relations</i> and <i>Commerce and Navigation</i> .)			
Port of Charleston. (See <i>Charleston</i> .)			
Portuguese Dominions. (See <i>Commercial Relations</i> and <i>Commerce and Navigation</i> .)			
Postages reported as due the Canadian, miscellaneous, and German Lloyd lines of steamers, (being sea postages,) for the year ending September 30, 1860. Statement of amount of.....	3	1	563
Postages accounted for on foreign dead letters sent from and returned to the United States for the year ending June 30, 1860. Statement of the amount of.....	3	1	563
Postages reported as due the Vanderbilt, Havre, and North Atlantic Steamship Company lines, (being the sea and inland postages,) for the year ending June 30, 1860. Statement of amount of.....	3	1	563
Postages on mails exchanged between the United States and the British Provinces during the fiscal year ending June 30, 1860. Statement of the amount of.....	3	1	556
			557
			558
Postage accounts between the United States and England, Prussia, France, Bremen, and Hamburg. Statement of.....	3	1	559
			560
			561
Postages reported as due the various West India lines of steamers for the year ending June 30, 1860. Statement of the amount of.....	3	1	564
Postage on Belgian mails received in and sent from the United States from January 24 to June 30, 1860. Statement of the amount of letter.....	3	1	547
Postage on Bremen mails received in and sent from the United States during the year ending June 30, 1860. Statement of letter.....	3	1	548
Postage on Hamburg mails received in and sent from the United States during the year ending June 30, 1860. Statement of letter.....	3	1	548
Postages conveyed by various lines of ocean steamers during the year ending June 30, 1860. Statement of letters and newspapers, with the several.....	3	1	554
Postages reported as due the Vanderbilt, Havre, North Atlantic Steamship Company, Canadian, miscellaneous, German Lloyd, and West India lines of steamships. Statement of the amount of.....	3	1	563
			564
Postage on drop letters. Report relating to a modification of the law levying.....	3	1	443
Postages on letters carried through unauthorized private expresses. Opinion of the circuit court of the United States in relation to levying and collecting.....	3	1	507
Postage on British mails received in and sent from the United States during the year ending June 30, 1860. Statement of the amount of letter.....	3	1	544

Subject.	Vol.	No.	Page.
Postage on Prussian mails received in and sent from the United States during the year ending June 30, 1860. Statement of the amount of letter.....	3	1	545
Postage on French mails received in and sent from the United States during the year ending June 30, 1860. Statement of the amount of letter.....	3	1	546
Postal convention between the United States and the Kingdom of Belgium. Copy of the.....	3	1	454
Postal convention between the United Kingdom of Great Britain and Ireland and the United States. Copy of the additional articles agreed upon to the.....	3	1	453
Postal laws. Report in relation to proposed amendments to the	3	1	448
Postal convention between the United States and the Hanseatic Republic of Bremen. Copy of additional articles to the.....	3	1	{ 486 487
Postal convention between the United States and Hamburg. Copy of additional articles to the.....	3	1	486
Postal receipts and expenditures in each State and Territory during the fiscal year ending June 30, 1860. Statement of.....	3	1	540
Postmaster General for the year ending June 30, 1860. Annual report of the.....	3	1	417
Postmaster at New York. Report in relation to the defalcation of the	3	1	447
Postmaster at New York, of the condition of the system of collecting and delivering letters in said city by carriers and mail messengers, with the names and amount of receipts of the several carriers. Statement of John A. Dix.....	3	1	{ 499 505
Post Office Department of the United States and Great Britain, Prussia, France, Belgium, and Hamburg, during the year ending June 30, 1860. Statement of the number of letters and newspapers exchanged between the	3	1	{ 549 550
Post Office Department, by the Cunard line, for the year ending June 30, 1860. Statement of revenue to the United States and to the United States.....	3	1	551
Post Office accounts between the United States and England, Ireland, Prussia, France, Bremen, and Hamburg, Germany. Statement of	3	1	{ 557 to 561
Post Office accounts due from the United States to the United Kingdom of Great Britain and Ireland, and to France, Bremen and Hamburg; and due to the United States from Prussia. Statement of balances of.....	3	1	{ 562 563
Post Office extension. Report on the operations of the past year of the.....	2	1	180
Post Office Department, annually, from 1853 to 1860, and estimates for 1861 and 1862. Statement of the receipts and expenditures of the.....	3	1	424
Post Office Department. Report in relation to the retrenchments of the.....	3	1	447
Post Office Department of the United States of America, and that of Great Britain and Ireland. Additional articles to the postal convention between the.....	3	1	453
Post Office Department, for the fiscal year ending June 3, 1860. Report of the Auditor of the Treasury for the	3	1	524
Post Office Department, from 1846 to 1860. Statement of the uncollected revenue and balances of the	3	1	532
Post offices, after deducting the maximum compensation of \$2,000 per annum of the postmasters and incidental office expenses. Statement of surplus emoluments and commissions accrued at the principal	3	1	536
Post Office Department, under their several heads, for the fiscal year ending June 30, 1860. Statements of the receipts and expenditures of the	3	1	{ 538 539
Post offices in the cities of New York, Philadelphia, Baltimore, Boston, Washington, D. C., Providence, St. Louis, New Orleans, Lowell, Manchester, Roxbury, and Harrisburg. Statement of letters, circulars, newspapers, and pamphlets, received and delivered and amounts received and paid out by carriers of the.....	3	1	543

Subject.	Vol.	No.	Page.
Post offices in each State and Territory, during the year ending June 30, 1860. Statement of receipts and expenditures of the.....	3	1	540
Patapsco river. (See <i>River</i> .)			
Potomac water works. Report of the engineer of the.....	1	1	564
Practice-ship. (See <i>Naval practice-ship</i> .)			
President of the United States on the state of the Union. Annual message of the.....	1	1	3
President of the United States, in answer to a resolution of the Senate respecting the vacancy in the office of Secretary of War. Message of the.....	4	2	1
President of the United States, submitting to Congress a series of resolutions adopted by the legislature of Virginia on the 19th of January, 1861, having in view a peaceful settlement of the exciting questions which now threaten the Union. Message of the.....	4	3	1
President of the United States, communicating the correspondence with foreign ministers at Washington in regard to foreign vessels in the port of Charleston, South Carolina. Message of the.....	4	5	1
President of the United States, communicating information upon the subject of Aves or Bird Island, claimed by the government of Venezuela adversely to the government of the United States. Message of the.....	4	10	1
(For list of papers accompanying the above, see page 2 of same.)			
President of the United States, communicating information relative to the extradition of a fugitive from justice, John Anderson, a man of color, harbored by the British authorities in Canada. Message of the.....	4	11	1
President of the United States, (Mr. Lincoln,) March 4, 1851, (No. 1, Special session.) Inaugural address of the.....	4	.....	1
Proposals. (See <i>Navy</i> .)			
Provisions and clothing. Annual report, with estimates, of the Bureau of.....	3	1	346
Provisions, clothing, and small stores, &c., condemned on national vessels and at naval stores, at home and abroad, in 1860. Statement of the cost of and loss on	3	1	353
Prussian commerce. (See <i>Commerce and Navigation</i> .)			
Prussian mails. (See <i>Mails</i> .)			
Public buildings. (See <i>Buildings</i> .)			
Public lands. (See <i>Lands</i> .)			
Q.			
Quartermaster General of the Army, for the fiscal year ending September 30, 1860. Annual report of the	2	1	233
Quartermaster of the Marine Corps, under advertisement of September 22, 1859. Statement of bids received for supplying rations, wood, and coal, by the.....	3	1	{ 392 396
Quartermaster's department of the United States Marine Corps, for rations, clothing, &c. Statement of existing contracts by the....	3	1	395
R.			
Railroad. Remarks of the President in relation to the Pacific	1	1	24
Railroads, and approved of in the States of Alabama, Florida, Iowa, Louisiana, Michigan, Minnesota, Mississippi, and Wisconsin. Statements of the quantity of lands granted to.....	1	1	67
Railroad mail service, as in operation September 30, 1860. Statement of.....	3	1	494
Receipts and expenditures during the year ending June 30, 1860, and the value of all stores on hand at the several Navy-yards July 1, 1860. Statement of.....	3	1	239
Receipts and disbursements in closed mails between the United States and Prussia, during the year ending June 30, 1860. Statement of.....	3	1	553

Subject.	Vol.	No.	Page.
Receipts and expenditures of the Post Office Department, for the year ending June 30, 1860. Statement of.....	3	1	{ 538
Receipts and expenditures of the post offices in each State and Territory, during the year ending June 30, 1860. Statement of.....			{ 539
Registered tonnage. (See <i>Tonnage</i> .)	3	1	540
Registration of letters. (See <i>Letters</i> .)			
Representatives in Congress on the same day in all the States of the Union. Recommendation of the President for the election of	1	1	25
Resignations, &c., in the Navy. (See <i>Navy</i> .)	3	1	447
Retrenchments of the Post Office Department. Report in relation to the..			
Revenue accrued to the United States and to the United States Post Office Department by the Cunard line of steamers, for the year ending June 30, 1860. Statement of the amount of.....	3	1	551
Rivers. Report of the exploration of the San Juan and headwaters of the Missouri and Yellowstone.....	2	1	146
Rivers Savannah, near the city of Savannah, and Susquehanna, near Havre-de-Grace, and the Patapsco. Report of improvements of the.....	2	1	290
River raft. Report in relation to the removal of the Red	2	1	294
River. Report in relation to the improvement of the Des Moines rapids in the Mississippi.....	2	1	294
River. Report in relation to the improvement of the navigation of the St. Clair flats and St. Mary's	2	1	{ 294
Roads. Remarks of the Secretary of the Interior in relation to the Fort Kearney, South Pass, and Honey Lake, and the El Paso and Fort Yuma wagon government.....			{ 295
Road from Fort Benton to Fort Walla-Walla. Report on the construction of the military.....	1	1	46
Roads in Minnesota, Kansas, and Nebraska, New Mexico, Southern Oregon, Northern Oregon, and Washington Territory. Report in relation to certain military.....	2	1	147
Russia. Views of the President on the relations between the government of the United States and.....	2	1	295
Russia. (See <i>Commercial Relations</i> and <i>Commerce and Navigation</i> .)	1	1	16
S.			
Sailing vessels of corresponding classes. Statement of the actual cost per annum of maintaining steam vessels of each class as compared with.....	4	4	32
Saint Clair flats. Report in relation to a beacon and light-house.....	2	1	294
San Francisco to China. Report of the survey of the route from.....	3	1	50
San Juan, in the vicinity of Washington Territory, Views of the.. President in relation to the claim of Great Britain to the island of	1	1	16
Sandwich Islands. (See <i>Commercial Regulations</i> and <i>Commerce and Navigation</i> .)			
Sardinia. (See <i>Commerce and Navigation</i> .)			
Savannah river. (See <i>River</i> .)			
Saxony. (See <i>Commercial Relations</i> .)			
Screw ships of the Navy, with tonnage and battery, including caliber and weight of broadside, and where built. Statement of the cost of each of the.....	4	4	54
Seamen and marines in the United States service annually from 1840 to 1860, inclusive. Estimate of the number of.....	4	4	30
Secession of a State from the general government. Views of the President of the United States on the right of the.....	1	1	7
Sectional differences existing between the northern and southern citizens of the United States. Views of the President of the United States concerning.....	1	1	3
Shelton's Island, <i>alias</i> Aves or Bird Island, claimed by the government of Venezuela adversely to the claim of the United States. Correspondence in relation to.....	4	10	1
Ship canal. (See <i>Canal</i> .)			
Shipments to the United States naval squadrons on foreign stations during the year ending June 30, 1860. Statement of the value of..	3	1	352
Siam. (See <i>Commercial Relations</i> and <i>Commerce and Navigation</i> .)			

Subject.	Vol.	No.	Page.
Slavery as connected with sectional controversies. Views of the President of the United States in relation to.....	1	1	4
Slave trade. Remarks of the President in relation to the African.....	1	1	24
Slave trade. Remarks of the Secretary of the Interior in relation to the laws on the subject of the African.....	1	1	41
Slavery where it exists in the southern States of the Union, (No. 1, special session.) Views of President Lincoln in relation to the institution of.....	4	.....	1
Small stores. (See <i>Navy</i> .)			
Southern States that by the accession of a Republican administration their property and their peace and personal security are to be endangered, (No. 1, special session.) President Lincoln's remarks in his inaugural address relating to an apprehension existing among the people of the.....	4	.....	1
South Carolina as an independent State and that of a foreign <i>de facto</i> government. Views of the President in relation to the difference between the recognition of.....	1	1	11
Southwest Executive Building. (See <i>Estimates</i> .)			
Spain. Views of the President in relation to the Amistad and Cuban claims against the government of.....	1	1	16
Spanish Dominions. (See <i>Commercial Relations and Commerce and Navigation</i> .)			
State and Territory. (See <i>Commerce of each State, &c.</i>)			
State from the Union is not a constitutional remedy for supposed evils. Opinion of President Buchanan that the secession of a.....	1	1	7
State into submission. Views of the President in relation to the power of Congress to coerce a seceding.....	1	1	11
States and Territories of the United States. Statement of the area in acres and in square miles of the several.....	1	1	53
State and the ministers at Washington from England, Spain, and Bremen, in relation to foreign vessels in the port of Charleston, South Carolina. Correspondence between Mr. Black, Secretary of.....	4	5	1
State and others, in relation to Shelton's <i>alias</i> Aves or Bird Island, claimed by inhabitants of Venezuela adversely to the claim of the United States. Report with the correspondence between Mr. Marcy, late Secretary of.....	4	10	1
State and Lord Lyons, the British minister at Washington, and Mr. Dallas, American minister at London, in relation to the extradition of John <i>alias</i> Jack Anderson, a colored man charged with murder in the State of Missouri, and who escaped into Canada. Correspondence between Mr. Cass, late, and Mr. Black, present, Secretary of.....	4	11	1
State, transmitting the annual statement of the commercial relations of the United States with foreign nations for the year ending September 30, 1860, (Parts I and II, in quarto.) Letter of the Secretary of.....	9	6	1
States of the Zollverein. (See <i>Commercial Relations and Commerce and Navigation</i> .)			
Steamboat mail service in the several States and in Washington Territory. Statement of.....	3	1	501
Steam vessels of each class, as compared with sailing vessels of corresponding classes. Statement of the actual cost of maintaining in commission.....	4	4	32
Statistical view, &c. (See <i>Commerce</i> .)			
Steamers. Report of the Board of Naval Officers, in relation to the expediency of converting the sailing vessels of the Navy into war....	3	1	32
Steamers. Statement of closed mail account with the several lines of ocean mail.....	3	1	552
Steamers during the year ending June 30, 1860. Statement of letters and newspapers, with the postages, conveyed by the various lines of ocean.....	3	1	554
Steen and Lieutenant Mullan, relative to the movement of troops overland to the northern portion of the department of the Pacific, (No. 2, special session.) Communications from Major.....	4	2	1

Subject.	Vol.	No.	Page.
Superintendent of the Census. Report of the.....	1	1	501
Surgeon General of the Army for 1860. Annual report of the.....	2	1	241
Surveyor General of Minnesota for 1860. Annual report of the.....	1	1	107
Surveyor General of Wisconsin and Iowa. Annual report of the.....	1	1	119
Surveyor General of Illinois and Missouri. Annual report of the.....	1	1	125
Surveyor General of Louisiana. Annual report of the.....	1	1	130
Surveyor General of Florida. Annual report of the.....	1	1	151
Surveyor General of New Mexico. Annual report of the.....	1	1	173
Surveyor General of Kansas and Nebraska. Annual report of the.....	1	1	176
Surveyor General of California. Annual report of the.....	1	1	198
Surveyor General of Oregon. Annual report of the.....	1	1	215
Surveyor General of Washington Territory. Annual report of the.....	1	1	225
Survey of the Mississippi Delta, and the Northern and Northwestern Lakes. Report in relation to the.....	2	1	292
Surveyors General of the public lands. Reports of the.....	1	1	107
Surveys of lands in the States of Missouri, Louisiana, Wisconsin, Iowa, Minnesota, California, Oregon, and Territories of Da- cotah, Washington, New Mexico, Utah, and the Keys and Islands along the coast of California, with applications for sur- veys at the foot of the Rocky Mountains. Report of the prog- ress of	1	1	54
Sweden and Norway. (See <i>Commercial Relations and Commerce and Navigation.</i>)			
Switzerland. (See <i>Commercial Relations.</i>)			
Susquehanna river. (See <i>Rivers.</i>)			
T.			
Tariff, and the application of specific instead of ad valorem duties. Remarks of the President in favor of a modification of the.....	1	1	25
Tide on Lake Michigan. (See <i>Lake Michigan.</i>)			
Tonnage thereof in the several States and Territories of the United States from 1815 to 1860 inclusive. (Commerce and Navigation Report.) Statement of the number and class of vessels built, and the.....	8	.....	674
Tonnage of the United States, showing the tonnage employed in the whale fishery ; also, the proportion of the enrolled and licensed tonnage employed in the coasting trade, cod, mackerel, and whale fisheries, from 1815 to 1860, inclusive. (Commerce and Navigation Report.) A comparative view of the registered and enrolled	8	.....	670
Tonnage thereof in each State and Territory of the United States. (Commerce and Navigation Report.) Statement of the number and class of vessels built, and the.....	8	.....	662
Tonnage accounts, showing the comparative amount of tonnage during the year ending June 30, 1860. (Commerce and Navigation Report.) General statement of	8	.....	654
Tonnage of the United States June 30, 1860. (Commerce and Navi- gation Report.) Recapitulation of the.....	8	.....	656
Tonnage and crews, which departed from each district of the United States, and the countries to which they cleared, and which en- tered into each district of the United States, and the countries from which they arrived, during the year ending June 30, 1860. (Commerce and Navigation Report.) Statement of the number of American and foreign vessels, with their.....	8	.....	{ 564 586
Tonnage of the several districts of the United States on the last day of June, 1860. (Commerce and Navigation Report.) Statement of the.....	8	.....	650
Tonnage and crews, which cleared from each district of the United States for and which entered into each district of the United States from foreign countries during the year ending June 30, 1860. (Commerce and Navigation Report.) Statement of the number of American and foreign vessels, with their.....	8	.....	{ 556 560
Tonnage and crews, which cleared from the United States for foreign countries during the year ending June 30, 1860. (Commerce			

Subject.	Vol.	No.	Page.
and Navigation Report.) Statement of the number of American and foreign vessels, with their.....	8	.....	526
Tonnage and crews, which entered into the United States from foreign countries, and from what foreign countries during the year ending June 30, 1860. (Commerce and Navigation Report.) Statement of the number of American and foreign vessels, with their.....	8	.....	530
Tonnage of American and foreign vessels arriving from and departing to each foreign country during the year ending June 30, 1860. (Commerce and Navigation Report.) Statistical view of the commerce of the United States, exhibiting the value of exports to and imports from each foreign country, and the.....	8	.....	548
Topographical Bureau. Annual report of the operations of the.....	2	1	292
Topographical Bureau. Synopsis of the stations and duties of the several officers attached to the.....	2	1	298
Totten and the Secretary of War, in relation to an advance of \$200 made by him to William Aspinwall for the United States, on account of land purchased of him for fortifications on Staten Island, New York. Correspondence between Brevet Brigadier General Joseph G.....	2	1	144
Trade of the United States, the countries of production, and of the shipment, with the value of the articles imported during the year ending June 30, 1860. (Commerce and Navigation Report.) General and summary statements exhibiting the indirect.....	8	.....	{ 610 646
Treasury of the Post Office Department for the fiscal year ending June 30, 1860, showing the revenue account of said department. Report of the Auditor of the.....	3	1	524
Treasury, transmitting a report of the Register of the Treasury of the commerce and navigation of the United States, for the year ending June 30, 1860. Report of the Secretary of the.....	8	.....	1
(See <i>Alliterated Index</i> , and <i>Index to General Statements of the above</i> , at pages 677 and 684 of same.)			
Troops overland to the northern portion of the department of the Pacific. (No. 2, special session.) Communications from Major Steen and Lieutenant Mullan, relative to the movement of.....	4	.....	1
Turkey. (See <i>Commerce and Navigation</i> .)			
Turkish Dominions. (See <i>Commercial Relations</i> .)			
Tuscany. (See <i>Commerce and Navigation</i> .)			
Two Sicilies. (See <i>Commerce and Navigation</i> .)			
U.			
Union of the States. Resolutions of the legislature of Virginia, having in view a peaceful settlement of the exciting questions which now agitate and threaten the dissolution of the.....	4	3	1
Union. (No. 1, special session.) Views of President Lincoln in relation to slavery, and in regard to the apprehensions respecting slave property of that portion of the people of the United States residing in the southern portion of the.....	4	.....	1
Uruguay. (See <i>Commerce and Navigation</i> .)			
Utah. Remarks of the President on the condition of the Territory of..	1	1	22
V.			
Vacancy in the office of Secretary of War. Message of the President of the United States respecting the.....	4	1	1
Venezuela, adversely to the claim of the United States. Correspondence between Mr. Marcy and Mr. Cass, late Secretaries of State, and Mr. Eames and Mr. Turpin, American ministers at Venezuela, and the Venezuelan authorities in relation to Shelton's <i>alias</i> Bird or Aves Island, claimed by the government of.	4	10	1
Venezuelan commercial relations. (See <i>Commercial Relations</i> and <i>Commerce and Navigation</i> .)			
Vessels in commission belonging to the Navy October 31, 1860. Statement of.....	3	1	235

Subject.	Vol.	No.	Page.
Vessels in ordinary, repairing, equipping, &c. Statement of the names and characters of.....	3	1	238
Vessels on the stocks and in progress of construction October 31, 1860. Statement of the.....	3	1	239
Vessels of the Navy, or in receiving or securing stores and material for those purposes. Statement of the number of days' labor, its average per diem cost from June 30, 1859, to June 30, 1860, for the respective navy-yards, for building and equipping.....	3	1	240
Vessels of the Navy in commission, with their names, class, station, caliber of armament, and total number of guns to each during each year, from 1840 to 1860. Statement of the number of.....	4	4	4 to 27
Vessels of the Navy annually from 1840 to 1860. Statement of the total amount expended for the equipment and repair of.....	4	4	31
Vessels and sailing vessels. Statement of the actual and comparative cost per annum of maintaining in commission each class of steam.....	4	4	32
Vessels in the port of Charleston, South Carolina Correspondence with the ministers of Bremen, England, and Spain, in regard to foreign	4	5	1
Vessels of war, &c. Statement of the number and pay of clerks and watchmen at the naval stations and on board.....	4	8	1
Vessels during the year ending June 30, 1860. (Commerce and Navigation Report.) Summary statement of the quantity and value of goods, wares, and merchandise imported into the United States in American and foreign.....	8	.....	294
Vessels, with their tonnage and crews, which cleared from the United States for foreign countries, and to what foreign countries, during the year ending June 30, 1860. (Commerce and Navigation Report.) Statement of the number of American and foreign	8	.....	526
Vessels, with their tonnage and crews, which entered into the United States from foreign countries during the year ending June 30, 1860. (Commerce and Navigation Report.) Statement of the number of American and foreign.....	8	.....	530
Vessels which entered into and cleared from the United States for foreign countries, and for what foreign countries, during the year ending June 30, 1860. (Commerce and Navigation Report.) Statement of the national character of the foreign.....	8	.....	534
Vessels arriving from and departing to each foreign country during the year ending June 30, 1860. (Commerce and Navigation Report.) Statistical view of the commerce of the United States, exhibiting the value of the exports to and imports from each foreign country, and the tonnage of American and foreign.....	8	.....	548
Vessels, and of imports in American and foreign vessels, during the year ending June 30, 1860. (Commerce and Navigation Report.) Statement of the commerce of each State with the value of exports of American and foreign produce in American and foreign	8	.....	552
Vessels, with their tonnage and crews, which cleared from each district of the United States for foreign countries; and, also, which entered into each district of the United States from foreign countries, during the year ending June 30, 1860. (Commerce and Navigation Report.) Statement of American and foreign... }	8	.....	{ 556 560
Vessels, with their tonnage and crews, which departed from each district of the United States, and the countries from which they cleared, and which entered into each district of the United States, and the countries from which they arrived, during the year ending June 30, 1860. (Commerce and Navigation Report.) Statement of the number of American and foreign..... }	8	.....	{ 564 586
Vessels built, and the tonnage thereof, in each State and Territory of the United States during the year ending June 30, 1860. (Commerce and Navigation Report.) Statement, with recapitulation, of the number and class of.....	8	.....	662
Vessels built, and the tonnage thereof, in the several States and Territories of the United States, from 1815 to 1860, inclusive.			

Subject.	Vol.	No.	Page.
(Commerce and Navigation Report.) Statement showing the number and class of.....	8	.....	674
Virginia, having in view a peaceful adjustment of the exciting questions which now agitate and threaten the dissolution of the Union. Resolution of the Legislature of the State of.....	4	3	1
W.			
Wagon roads. (See <i>Roads</i> .)			
Warden of the Penitentiary in the District of Columbia. Annual reports of the clerk, physician, matron, chaplain, and.....	1	1	505
War steamers. (See <i>Steamers</i> .)			
War, showing the operations of the War Department during the year 1860. Annual report of the Secretary of.....	2	1	1
(See list of papers accompanying the above report at page 13 of the same.)			
War and Brevet Brigadier General Totten, in relation to an advance made by him for the United States to Wm. Aspinwall, for land for fortifications on Staten Island, New York. Correspondence between the Secretary of.....	2	1	144
War. Message of the President of the United States respecting the vacancy in the office of Secretary of.....	4	2	1
War, communicating a list of clerks and other civil officers employed in that department, with the amount of their salaries, during the year 1860. Report of the Secretary of.....	4	12	1
War, transmitting a communication from Major Steen and Lieutenant Mullan, relative to the movement of troops overland to the northern portion of the department of the Pacific. (No. 2, special session.) Report of the Secretary of.....	4	2	1
War, transmitting Lieutenant Michler's report of his survey for an interoceanic canal near the Isthmus of Darien. Report of the Secretary of.....	7	9	1
Washington Infirmary. (See <i>Infirmary</i> .)			
Water works. Report of the Engineer of the Potomac.....	1	1	564
Whale fishery. (See <i>Fisheries</i> .)			
Wright, Major Steen, and Lieutenant Mullan, relative to the movement of troops overland to the northern portion of the department of the Pacific. (No. 2, special session.) Communication from Colonel.....	4	2	1
Y.			
Yards and Dock. Annual report of the Bureau of.....	3	1	55
Yellowstone river. (See <i>River</i> .)			
Z.			
Zollverien, (Part I.) Statement of the commercial relations, &c., of the United States with the States of the.....	9	6	324

TABLE

OF

EXECUTIVE DOCUMENTS

PRINTED BY ORDER OF

THE SENATE OF THE UNITED STATES,

SECOND SESSION OF THE THIRTY-SIXTH CONGRESS,

1860-61.

Subject.	Vol.	No.	Page.
<i>Messages from the President of the United States, viz:</i>			
On the state of the Union.....	1	1	1
Respecting the vacancy in the office of Secretary of War.....	4	2	1
Submitting to Congress a series of resolutions adopted by the legislature of Virginia, January 19, 1861, having in view a peaceful settlement of the exciting questions which now threaten the Union.....	4	3	1
Transmitting the correspondence with foreign ministers at Washington, in regard to foreign vessels in the port of Charleston, South Carolina.....	4	5	1
Transmitting correspondence respecting the Island of Aves, in the Caribbean sea	4	10	1
<i>List of papers accompanying the above, viz:</i>			
Messrs. Sampson & Tappan and Shelton to Mr. Marcy, January 15, 1855.....	4	10	5
Same to same, January 29, 1855.....	4	10	6
Mr. Marcy to Messrs. Sampson & Tappan and Shelton, January 31, 1855.....	4	10	7
Mr. Shelton to Mr. Marcy, February 26, 1855.....	4	10	8
Mr. Marcy to Mr. Shelton, March 2, 1855.....	4	10	9
Mr. French to Mr. Marcy, (inclosure,) May 5, 1855.....	4	10	10
Same to same, (inclosures,) May 12, 1855.....	4	10	10
Mr. Shelton to Mr. Marcy, May 14, 1855.....	4	10	16
Mr. Marcy to Mr. Shelton, June 14, 1855.....	4	10	25
Mr. Shelton to Mr. Marcy, June 20, 1855.....	4	10	26
Mr. French to same, June 22, 1855.....	4	10	39
Mr. Shelton to same, (inclosures,) June 24, 1855.....	4	10	40
Mr. French to same, June 26, 1855.....	4	10	73
Same to same, (inclosures,) June 30, 1855.....	4	10	73
Same to same, December 17, 1855.....	4	10	77
Mr. Marcy to Mr. French, December 20, 1855.....	4	10	77
Mr. Sanford to the President, December 24, 1855.....	4	10	78
Same to Mr. Marcy, January 3, 1856.....	4	10	81
Mr. Marcy to Mr. Shelton, January 4, 1856.....	4	10	82
Mr. Sanford to the President, (inclosure,) January 5, 1855.....	4	10	82
Same to Mr. Marcy, January 5, 1856.....	4	10	84
Mr. Marcy to Mr. Sanford, January 7, 1856	4	10	84
Same to same, January 9, 1856.....	4	10	85

Subject.	Vol.	No.	Page.
Aves Island correspondence—List of papers—Continued.			
Mr. Sanford to Mr. Marcy, January 12, 1856.....	4	10	85
Same to the President, (inclosures,) January 13, 1856.....	4	10	91
Mr. Sanford to same, January 16, 1856.....	4	10	93
Mr. Marcy to Mr. Shelton, January 19, 1856.....	4	10	93
Mr. French to Mr. Marcy, (inclosure,) January 21, 1856	4	10	94
Mr. Thomas to Mr. French, January 22, 1856.....	4	10	96
Mr. Marcy to Mr. Sanford, January 25, 1856.....	4	10	96
Mr. Sanford to Mr. Marcy, (inclosure,) February 1, 1856.....	4	10	96
Mr. Marcy to Mr. Sanford, February 6, 1856.....	4	10	102
Mr. Sanford to Mr. Marcy, February 12, 1856.....	4	10	99
Same to same, February 20, 1856.....	4	10	102
Mr. Sanford to Mr. Marcy, (inclosures,) March 8, 1856.	4	10	103
Mr. Marcy to Mr. Sanford, March 24, 1856.....	4	10	109
Mr. Sanford to Mr. Marcy, April 14, 1856.....	4	10	111
Same to the President, (inclosures,) April 14, 1856.....	4	10	111
Mr. Marcy to Mr. Sanford, April 17, 1856.....	4	10	127
Mr. Sanford to Mr. Marcy, (inclosure,) April 19, 1856.....	4	10	128
Mr. Marcy to Mr. Sanford, May 1, 1856.....	4	10	131
Mr. Sanford to Mr. Marcy, May 9, 1856.....	4	10	132
Same to same, (inclosures,) May 10, 1856.....	4	10	132
Mr. Marcy to Mr. Sanford, May 16, 1856.....	4	10	135
Mr. French to Mr. Marcy, June 15, 1856	4	10	136
Mr. Sanford to same, June 30, 1856.....	4	10	137
Same to same, (inclosure,) July 3, 1856.....	4	10	140
Mr. Marcy to Mr. Sanford, July 7, 1856.....	4	10	143
Mr. Thomas to same, July 8, 1856.....	4	10	143
Mr. Sanford to Mr. Thomas, July 11, 1856.....	4	10	144
Same to Mr. Marcy, July 15, 1856.....	4	10	145
Mr. Marcy to Mr. Sanford, July 21, 1856	4	10	146
Sampson & Tappan and Shelton to Mr. Marcy, July 21, 1856...	4	10	147
Mr. Sanford to the same, (inclosure,) August 11, 1856.....	4	10	149
Mr. Eames to same, (inclosure,) October 9, 1856.....	4	10	152
Mr. Sanford to the President, December 14, 1856	4	10	156
Same to Mr. Marcy, December 16, 1856.....	4	10	157
Mr. Marcy to Mr. Sanford, December 23, 1856.....	4	10	158
Mr. Sanford to Mr. Marcy, December 27, 1856.	4	10	159
Mr. Eames to same, (inclosure,) January 7, 1857.....	4	10	162
Mr. Marcy to Mr. Sanford, January 9, 1857.....	4	10	168
Mr. Sanford to Mr. Marcy, January 10, 1857.....	4	10	168
Same to same, (inclosure,) January 22, 1857.....	4	10	169
Same to same, (inclosure,) January 26, 1857.....	4	10	173
Mr. Shelton to Mr. Marcy, January 31, 1857.. ..	4	10	180
Mr. Marcy to Mr. Shelton, February 3, 1857.....	4	10	181
Same to Mr. Sanford, February 3, 1857.....	4	10	180
Same to Mr. Eames, (inclosure,) February 3, 1857	4	10	181
Mr. Eames to Mr. Marcy, February 28, 1857.	4	10	196
Mr. Cass to Mr. Eames, April 1, 1857.....	4	10	197
Mr. Eames to Mr. Cass, (inclosure,) April 1, 1857.....	4	10	198
Same to Mr. Eames, April 3, 1857.	4	10	226
Mr. Cass to Mr. Eames, May 25, 1857.....	4	10	227
Mr. Eames to Mr. Cass, (inclosure,) June 13, 1857.....	4	10	228
Mr. Sanford to same, (inclosure,) August 10, 1857.....	4	10	235
Same to same, (inclosure,) August 16, 1857.....	4	10	242
Mr. Cass to Mr. Eames, August 31, 1857.....	4	10	272
Mr. Sanford to Mr. Cass, (inclosure,) August 31, 1857	4	10	275
Mr. Appleton to Mr. Sanford, September 4, 1857.....	4	10	276
Mr. Cass to Mr. Eames, September 4, 1857.....	4	10	276
Mr. Ribas to Mr. Cass, September 4, 1857.....	4	10	277
Mr. Cass to Mr. Ribas, September 11, 1857.....	4	10	278
Mr. Ribas to Mr. Cass, September 18, 1857.....	4	10	279
Mr. Gutierrez to same, September 21, 1857.....	4	10	280
Mr. Sanford to same, September 29, 1857.....	4	10	282
Mr. Cass to Mr. Eames, October 6, 1857.	4	10	283
Mr. Eames to Mr. Cass, (inclosure,) October 31, 1857.....	4	10	283

Subject.	Vol.	No.	Page.
Messages from the President of the United States—Aves Island Correspondence—Continued.			
Mr. Gutierrez to Mr. Cass, (inclosure,) October 31, 1857.....	4	10	287
Mr. Eames to same, (inclosure,) November 3, 1857	4	10	372
Mr. Cass to Mr. Gutierrez, November 12, 1857.....	4	10	374
Mr. Eames to Mr. Cass, (inclosures,) December 3, 1857.....	4	10	375
Mr. Cass to Mr. Eames, December 15, 1857.....	4	10	380
Mr. Shelton to Mr. Cass, December 17, 1857.....	4	10	381
Mr. Cass to Mr. Briceño, February 24, 1858.....	4	10	381
Mr. Briceño to Mr. Cass, February 24, 1858.....	4	10	384
Mr. Eames to same, (inclosure,) February 24, 1858.....	4	10	382
Mr. Cass to Mr. Briceño, February 26, 1858.....	4	10	384
Mr. Briceño to Mr. Cass, February 27, 1858.....	4	10	385
Mr. Cass to Mr. Briceño, March 4, 1858.....	4	10	389
Mr. Briceño to Mr. Cass, March 4, 1858.....	4	10	391
Same to same, March 8, 1858.....	4	10	391
Mr. Eames to same, (inclosure,) March 25, 1858.....	4	10	394
Mr. Briceño to same, (inclosure,) April 7, 1858.....	4	10	396
Mr. Sanford to same, April 13, 1858.....	4	10	420
Mr. Briceño to same, April 25, 1858.....	4	10	423
Mr. Cass to Mr. Briceño, April 27, 1858.....	4	10	423
Mr. Cass to Venezuelan Minister of Foreign Relations, May 10, 1858.....	4	10	424
Same to Mr. Eames, May 10, 1858.....	4	10	425
Mr. Eames to Mr. Cass, (inclosure,) May 13, 1858.....	4	10	427
Mr. Sanford to same, May 22, 1858.....	4	10	428
Mr. Eames to same, (inclosure,) July 7, 1858.....	4	10	435
Mr. Cass to Mr. Sanford, July 31, 1858.....	4	10	440
Mr. Appleton to Mr. Turpin, August 24, 1858.....	4	10	441
Messrs. Cotting & Lang to Mr. Cass, August 31, 1858.....	4	10	443
Mr. Cass to Mr. Turpin, September 3, 1858.....	4	10	444
Mr. Sanford to Mr. Cass, September 8, 1858.....	4	10	444
Mr. Cass to Mr. Turpin, September 15, 1858.....	4	10	446
Mr. Appleton to Mr. Sanford, September 27, 1858.....	4	10	446
Mr. Turpin to Mr. Cass, (inclosure,) October 23, 1858.....	4	10	447
Same to same, (inclosure,) December 1, 1858.....	4	10	450
Mr. Sanford to same, December 9, 1858	4	10	452
Mr. Cass to Mr. Turpin, December 10, 1858.....	4	10	453
Mr. Sanford to Mr. Cass, (inclosures,) January 14, 1859.....	4	10	454
Mr. Appleton to Mr. Turpin, January 22, 1859.....	4	10	455
Mr. Cass to same, February 7, 1859.....	4	10	456
Mr. Turpin to Mr. Cass, (inclosure,) February 8, 1859.....	4	10	456
Mr. Appleton to Mr. Sanford, March 4, 1859.....	4	10	461
Mr. Sanford to Mr. Appleton, April 8, 1859.....	4	10	461
Mr. Sanford to Mr. Cass, October 17, 1859.....	4	10	470
Mr. Cass to Mr. Sanford, October 22, 1859.....	4	10	472
Transmitting information relative to the extradition of one John alias Jack Anderson, charged with murder in the State of Missouri, and who fled to Canada, a British province.....	4	11	1
Inaugural address of President Lincoln, March 4, 1861, (No. 1, special session).....	4	1	1
<i>Reports of the Secretary of State, viz:</i>			
Transmitting the annual statement of the commercial relations of the United States with foreign countries, for the year ending September 30, 1860, in two parts.....	9	6	1
<i>Contents of Part 1:</i>			
British Dominions—			
General resumé of the commercial relations between England and the United States, in 1860.....	9	6	3
London. Commercial statistics	9	6	14
Liverpool. "Protections," &c.....	9	6	17
Manchester. "Protections," &c.....	9	6	19

Subject.	Vol.	No.	Page.
Annual statement of commercial relations—Continued.			
British Dominions—Continued.			
Leeds. "Protections," commercial changes, and annual report for 1860.....	9	6	19
Plymouth. Annual report for 1860.....	9	6	24
Falmouth. Mining statistics and American trade at.....	9	6	25
Scotland—			
Leith. Commercial statistics.....	9	6	26
Glasgow. "Protections".....	9	6	26
Dundee. Annual report and general statistics.....	9	6	27
Ireland—			
Dublin. Annual report for 1860.....	9	6	31
Galway. Navigation statistics.....	9	6	35
Possessions and dependencies—			
Malta.....	9	6	36
Mauritius. General and sugar statistics.....	9	6	36
Calcutta. Commercial statistics.....	9	6	40
Singapore. General information.....	9	6	44
Sydney. General information.....	9	6	45
Melbourne. Commercial statistics.....	9	6	51
Hobart Town. "Foreign seaman's act".....	9	6	54
Bay Islands. "Foreign seaman's act".....	9	6	58
Cape Town. Commercial statistics.....	9	6	60
Port Elizabeth. Quarter's exports, September 30, 1860.....	9	6	63
Zante. Commercial statistics.....	9	6	64
Montreal. "Protections".....	9	6	68
Halifax. "Protections".....	9	6	69
Pictou. General commercial statistics.....	9	6	70
Sydney, (N. S.).....	9	6	75
Kingston. General statistics.....	9	6	79
Bahamas. Trade of 1859 with the United States.....	9	6	79
Nassau. Annual report.....	9	6	80
Turk's Island. Annual report.....	9	6	83
Barbadoes. Annual report.....	9	6	87
British Guiana—			
Georgetown. Postal ordinance.....	9	6	88
Demerara. General information.....	9	6	89
Falkland Islands—			
Stanley. General information.....	9	6	90
Canton. Biennial reports, June 30, 1860.....	9	6	91
French Dominions—			
Resumé of our commercial relations with France.....	9	6	93
Havre. "Protections." General and annual report.....	9	6	122
Bordeaux. Decree, &c.....	9	6	134
La Rochelle. General commercial information.....	9	6	135
Lyons. Commercial statistics and general information.....	9	6	136
Nantes. Annual report.....	9	6	148
Society Islands. General commercial information.....	9	6	152
Spanish Dominions—			
Cadiz. General trade reports.....	9	6	159
Malaga. General commercial information.....	9	6	159
Port Mahon.....	9	6	170
Cuba—			
Havana. "Protections." General and annual reports, decrees, &c.....	9	6	170
Matanzas. Trade reports. Annual report.....	9	6	180
St. Jago de Cuba. Annual report.....	9	6	186
Porto Rico—			
San Juan. "Protections." General and annual reports, decrees, &c.....	9	6	187
Ponce. Tonnage regulations.....	9	6	206
Portuguese Dominions—			
Oporto. General custom-house tariff.....	9	6	207
Fayal. "Protections." Commercial statement.....	9	6	229

Subject.	Vol.	No.	Page.
Annual statement of commercial relations—Continued.			
Holland and possessions—			
General trade of	9	6	232
Batavia. Commercial regulations and tariff	9	6	232
Paramaribo. Annual report	9	6	239
Belgium—			
Commercial relations with the United States	9	6	242
Antwerp. General and annual reports	9	6	247
Ghent	9	6	251
Denmark and possessions—			
Elsinore. General commercial reports	9	6	252
St. Thomas. Annual report	9	6	253
Sweden and Norway—			
Resumé of our commercial relations with	9	6	254
Stockholm. First, General commercial reports; second, Fisheries on the Coasts of Norway	9	6	255
Gottenberg. General reports	9	6	257
Russia—			
Resumé of our commercial relations with	9	6	259
St. Petersburg. General and annual reports	9	6	261
Moscow. Cotton statistics	9	6	265
Revel. General reports	9	6	267
Odessa. General and annual reports	9	6	277
Amoor river. General and annual reports	9	6	286
Austria—			
Vienna. General and annual reports	9	6	306
Trieste. General and annual reports	9	6	317
States of the Zollverein—			
Resumé of commercial relations with foreign nations	9	6	324
Stettin	9	6	325
Bavaria. Annual report, &c.	9	6	325
Saxony—			
Leipsic. General commercial reports	9	6	329
Wurtemberg. General resumé	9	6	330
Baden. General reports	9	6	331
Hesse Cassel. General commercial reports	9	6	333
Nassau. General commercial reports	9	6	337
Frankfort-on-the-Main. General and special reports	9	6	339
Hanse Towns—			
Hamburg	9	6	355
Bremen. General summary. "Protections"	9	6	356
Switzerland—			
Basle. General and annual reports	9	6	376
Zurich. General and special reports. Silk and cotton man- ufactories	9	6	384
Italian States—			
Genoa. General reports	9	6	386
Naples. Commercial reports	9	6	386
Palermo. General and annual reports	9	6	387
Turkish Dominions—			
Constantinople. Commercial statistics. Regulations of navigation, &c.,	9	6	390
Beirut. General information	9	6	394
Japan—			
Treaty with	9	6	395
Yeddo. General information	9	6	403
Nagasaki. Commercial information	9	6	404
Hakodadi. General commercial information	9	6	404
Siam—			
Resumé of commercial relations with. Treaty, &c.	9	6	408
Bankok. General commercial reports	9	6	416
China—			
Shanghai. General commercial regulations. Reports	9	6	420
Foo-choo-Foo. Commercial statistics	9	6	426
Amoy. General annual reports	9	6	427

Subject.	Vol.	No.	Page.
Annual statement of commercial relations—Continued.			
Sandwich Islands—			
Lahaina. General reports	9	6	430
Feejee Islands—			
Lanthala. Commercial statistics.....	9	6	446
Dominican Republic—			
City of Domingo. Annual report. Decree.....	9	6	447
Mexico—			
Vera Cruz. General commercial reports.....	9	6	448
Matamoras. General annual reports... ..	9	6	451
Minatitlan. Annual report.....	9	6	453
Nicaragua—			
San Juan del Sur. General report.....	9	6	456
Costa Rica—			
San José. General commercial report.....	9	6	458
New Granada—			
Panama. Annual report. Panama railroad, &c.....	9	6	459
Carthagen. General report.....	9	6	460
Venezuela—			
Ciudad Bolivar. Commercial statement.....	9	6	461
Puerto Cabello. General report.....	9	6	461
Laguayra. Annual report	9	6	462
Ecuador—			
Guayaquil. Commercial statement	9	6	464
Bolivia—			
Cobija. General report.....	9	6	465
Brazil—			
Rio de Janeiro. General commercial report.....	9	6	467
Pernambuco. General commercial reports.....	9	6	473
Maranh. General commercial reports.....	9	6	474
Santos. General commercial information.....	9	6	480
Peru—			
Para. General commercial report.....	9	6	482
Callao. General commercial report	9	6	483
Argentine Confederation—			
Buenos Ayres. Commercial changes.....	9	6	488
Paraguay—			
Asuncion. General commercial information	9	6	489

Contents of Part II :

(The following is a list of countries and of the ports in each country from which Consular Returns of Commerce and Navigation will be found in the tables.)

British Dominions—			
Akyab.....	9	6	43
Antigua.....	9	6	68
Barbados	9	6	68
Bathurst.....	9	6	37
Bay of Islands.....	9	6	51
Belfast.....	9	6	29
Bermuda.....	9	6	59
Bombay.....	9	6	39
Bristol.....	9	6	13
Calcutta.....	9	6	41
Cape Town.....	9	6	33
Cardiff.....	9	6	15
Cork	9	6	27
Demarara.....	9	6	77
Dublin.....	9	6	27
Dundee.....	9	6	27
East Harbor.....	9	6	66
Falmouth.....	9	6	21
Gibraltar.....	9	6	30

Subject.	Vol.	No.	Page.
Annual Statement of Commercial Relations—Continued.			
British Dominions—Continued—			
Glasgow.....	9	6	25
Gloucester.....	9	6	20
Grand Turk.....	9	6	63
Halifax.....	9	6	54
Harbor Island.....	9	6	62
Hobart Town.....	9	6	51
Hong Kong.....	9	6	45
Inagua.....	9	6	62
Kingston, Jamaica.....	9	6	74
Leith.....	9	6	26
Liverpool.....	9	6	9
London.....	9	6	3
Londonderry.....	9	6	29
Malta.....	9	6	31
Mauritius.....	9	6	37
Melbourne.....	9	6	46
Milford Haven.....	9	6	21
Montreal.....	9	6	52
Nassau, New Providence.....	9	6	60
Newcastle, New South Wales.....	9	6	50
Newcastle-upon-Tyne.....	9	6	24
Newport.....	9	6	18
Penang.....	9	6	43
Pictou, Nova Scotia.....	9	6	55
Plymouth.....	9	6	23
Point de Galle.....	9	6	40
Port Adelaide.....	9	6	51
Port Elizabeth.....	9	6	35
Port of Spain.....	9	6	72
Prince Edward's Island.....	9	6	53
Quebec.....	9	6	52
Salt Cay.....	9	6	65
Simons Town.....	9	6	36
Singapore.....	9	6	43
St. Christopher.....	9	6	67
St. Helena.....	9	6	31
St. John's, New Brunswick.....	9	6	56
St. John's, Newfoundland.....	9	6	53
Stanley, Falkland Islands.....	9	6	52
Swansea.....	9	6	20
Seychelles.....	9	6	38
Sydney.....	9	6	48
Waterford.....	9	6	30
West Caicos.....	9	6	66
French Dominions—			
Bordeaux.....	9	6	82
Cette.....	9	6	84
Guadaloupe.....	9	6	88
Havre.....	9	6	78
La Rochelle.....	9	6	84
Marseilles.....	9	6	85
Martinique.....	9	6	89
Nantes.....	9	6	83
Tahiti.....	9	6	90
Toulon.....	9	6	88
Spanish Dominions—			
Alicante.....	9	6	95
Almeria.....	9	6	94
Cadiz.....	9	6	91
Cardenas.....	9	6	109
Cienfuegos.....	9	6	121
Denia.....	9	6	95
Guayama.....	9	6	125

Subject.	Vol.	No.	Page.
Annual Statement of Commercial Relations—Continued.			
Spanish Dominions—Continued—			
Havana.....	9	6	96
Malaga.....	9	6	92
Manilla.....	9	6	132
Matanzas.....	9	6	103
Mayaguez.....	9	6	129
Nuevitas.....	9	6	117
Ponce.....	9	6	127
Port Mahon.....	9	6	96
Sagua la Grande.....	9	6	116
St. Jago de Cuba.....	9	6	117
San Juan de los Remedios.....	9	6	117
St. John's, Porto Rico.....	9	6	124
Trinidad de Cuba.....	9	6	119
Portuguese Dominions—			
Fayal.....	9	6	134
Funchal.....	9	6	134
Lisbon.....	9	6	133
Macao.....	9	6	136
Oporto.....	9	6	134
Porto Praya.....	9	6	137
St. Paul de Loanda.....	9	6	135
Belgium—			
Antwerp.....	9	6	138
Dominions of the Netherlands—			
Amsterdam.....	9	6	141
Batavia.....	9	6	146
Curacao.....	9	6	142
Padang.....	9	6	147
Paramaribo.....	9	6	145
Rotterdam.....	9	6	140
St. Martin's.....	9	6	143
Hanse Towns—			
Bremen.....	9	6	148
Hamburg.....	9	6	149
Danish Dominions—			
Christianstadt.....	9	6	156
Copenhagen.....	9	6	150
Elsinore.....	9	6	151
Frederickstadt.....	9	6	157
St. Thomas.....	9	6	152
Sweden and Norway—			
Gothenburg.....	9	6	158
Stockholm.....	9	6	157
Russia—			
Cronstadt.....	9	6	159
Prussia—			
Stettin.....	9	6	160
Austria—			
Treiste.....	9	6	160
Venice.....	9	6	162
Sardinia—			
Genoa.....	9	6	162
Spezzia.....	9	6	164
Tuscany—			
Leghorn.....	9	6	164
Two Sicilies—			
Messina.....	9	6	165
Naples.....	9	6	165
Palermo.....	9	6	167
Turkey—			
Constantinople.....	9	6	169
Smyrna.....	9	6	169
Ionian Islands—			
Zante.....	9	6	170

Subject.	Vol.	No.	Page.
Annual Statement of Commercial Relations—Continued.			
Liberia—			
Monrovia.....	9	6	171
Muscat—			
Zanzibar.....	9	6	172
Siam—			
Bankok.....	9	6	173
China—			
Amoy.....	9	6	175
Canton.....	9	6	174
Foo-choo.....	9	6	176
Ningpo.....	9	6	177
Shanghae.....	9	6	179
Swatow.....	9	6	181
Japan—			
Kanagawa.....	9	6	182
Nagasaki.....	9	6	182
Sandwich Islands—			
Hilo.....	9	6	188
Honolulu.....	9	6	183
Lahaina.....	9	6	187
Friendly Islands—			
Apia.....	9	6	189
Dominican Republic—			
Porto Plata.....	9	6	190
St. Domingo City.....	9	6	190
Hayti—			
Aux Cayes.....	9	6	193
Cape Haytien.....	9	6	192
Gonavies.....	9	6	191
Port au Prince.....	9	6	191
Mexico—			
Acapulco.....	9	6	195
Minatitlan.....	9	6	197
Mazatlan.....	9	6	197
Tobasco.....	9	6	196
Tampico.....	9	6	194
Vera Cruz.....	9	6	193
Honduras—			
Omoa.....	9	6	199
Truxillo.....	9	6	199
Nicaragua—			
San Juan del Norte.....	9	6	199
San Juan del Sur.....	9	6	200
New Granada—			
Aspinwall.....	9	6	200
Carthagen.....	9	6	206
Panama.....	9	6	204
Rio Hacha.....	9	6	207
Sabanilla.....	9	6	205
Santa Martha.....	9	6	207
Venezuela—			
Ciudad Bolivar.....	9	6	209
Laguayra.....	9	6	210
Maracaibo.....	9	6	208
Puerto Cabello.....	9	6	208
Ecuador—			
Guayaquil.....	9	6	210
Brazil—			
Bahia.....	9	6	217
Maranham.....	9	6	217
Para.....	9	6	216
Pernambuco.....	9	6	213
Rio Grande do Sul.....	9	6	219

Subject.	Vol.	No.	Page.
Annual Statement of Commercial Relations—Continued.			
Brazil—Continued—			
Rio de Janeiro	9	6	211
Santos	9	6	220
Peru—			
Arica	9	6	224
Callao	9	6	220
Paita	9	6	223
Tumbez	9	6	223
Chili—			
Talcahuano	9	6	227
Valparaiso	9	6	225
Bolivia—			
Cobija	9	6	229
Argentine Confederation—			
Buenos Ayres	9	6	229
Rorsario	9	6	231
Uruguay—			
Montevideo	9	6	232
<i>Reports of the Secretary of the Treasury, viz :</i>			
Transmitting a report from the Register of the Treasury of the commerce and navigation of the United States for the year ending June 30, 1860. (Commerce and Navigation Report.)....	8	.....	1
<i>Index to the general statements accompanying the above report :</i>			
1. Exports of domestic produce	8	.....	7
2. Summary of the same	8	.....	53
3. Exports of foreign merchandise.....	8	.....	57
4. Summary of the same.....	8	.....	159
5. Imports of foreign merchandise	8	.....	171
6. Summary of the same	8	.....	292
7. Exports of domestic produce by districts.....	8	.....	307
8. Exports of foreign merchandise by districts.....	8	.....	353
9. Imports of foreign merchandise by districts.....	8	.....	403
10. Tonnage of American and foreign vessels cleared.....	8	.....	525
11. Tonnage of American and foreign vessels entered.....	8	.....	529
12. Tonnage and national character of foreign vessels entered and cleared.....	8	.....	533
13. Statistical view of the commerce of the United States.....	8	.....	547
14. Statistical view of the commerce of each State and Territory.	8	.....	551
15. Tonnage of American and foreign vessels cleared from each district	8	.....	555
16. Tonnage of American and foreign vessels entered into each district.....	8	.....	559
17. Countries to which American and foreign vessels cleared from each district.....	8	.....	563
18. Countries from which American and foreign vessels arrived in each district	8	.....	585
19. Imports indirect.....	8	.....	609
20. Summary of same	8	.....	645
21. Tonnage of the several districts of the United States.....	8	.....	649
22. Condensed view of the tonnage of the several districts of the United States.....	8	.....	657
23. Number and class of vessels built during the year 1860.....	8	.....	661
24. Comparative view of the registered and enrolled tonnage from 1815 to 1860.....	8	.....	669
25. Number and class of vessels built from 1815 to 1860.....	8	.....	673
<i>Reports of the Secretary of the Interior, viz :</i>			
On the operations of the Interior Department during the year ending June 30, 1860	1	1	29

Subject.	Vol.	No.	Page.
<i>Reports of the Secretary of War, viz :</i>			
On the operations of the War Department during the year ending June 30, 1860	2	1	1
<i>List of papers accompanying the above, viz :</i>			
Operations in the military department of the West.....	2	1	13
Operations in the military department of Texas.....	2	1	18
Operations in the military department of New Mexico	2	1	51
Operations in the military department of Utah	2	1	69
Operations in the military department of California	2	1	107
Operations in the military department of Oregon.....	2	1	117
Statement in relation to money advanced by General Totten.....	2	1	144
Annual report of the Office of Explorations and Surveys.....	2	1	146
Annual report on the Capitol Extension.....	2	1	172
Annual report on the new dome.....	2	1	178
Annual report on the Post Office Extension.....	2	1	180
Annual report of the Adjutant General.....	2	1	189
Annual report of the Quartermaster General	2	1	233
Annual report of the Commissary General.....	2	1	237
Annual report of the Paymaster General.....	2	1	238
Annual report of the Surgeon General.....	2	1	241
Annual report of the Engineer Bureau.....	2	1	253
Annual report of the Topographical Bureau.....	2	1	291
Annual report of the Chief of the Ordnance Office.....	2	1	961
Transmitting a list of clerks and other civil officers employed in the War Department during the year 1860.....	4	12	1
Transmitting communications from Major Steen, Lieutenant Mullan, and Colonel Wright, relative to the movement of troops overland to the northern portion of the department of the Pacific. (No. 2, special session.).....	4	2	1
Transmitting Lieutenant Michler's report of a survey for an inter-oceanic ship canal near the Isthmus of Darien	7	9	1
<i>Reports of the Secretary of the Navy, viz:</i>			
On the operations of the Navy Department during the year ending June 30, 1860	3	1	1
<i>List of papers accompanying the Annual Report of the Secretary of the Navy, December 1, 1860:</i>			
List of deaths, resignations, and dismissions since the last annual report.....	3	1	23
Report of the board of officers appointed to witness the examination of acting midshipmen, and to examine into the state of the police, discipline, and general management of the Naval Academy, Annapolis.....	3	1	27
Report of the summer's cruise of the practice-ship Plymouth, Commander T. T. Craven	3	1	28
Report of the board of officers appointed to examine the sailing vessels of the Navy, in order to determine the expediency of converting them into efficient war steamers.....	3	1	32
Preliminary reports of Captain Frederick Engle, chief; Lieutenant William A. Jeffers, hydrographer; Lieutenant James St. Clair Morton, topographer; and Dr. John Evans, geologist of the Chiriqui surveying expedition.....	3	1	36
Report of Captain Cadwalader Ringgold of the progress made in reducing the notes, surveys, &c., made under his direction whilst in command of the North Pacific and Behring's Straits expedition.....	3	1	44
Report of Commander John Rodgers of the progress made during the year, and the present condition, &c., of the work, of the North Pacific and Behring's Straits expedition under his charge.....	3	1	48

Subject.	Vol.	No.	Page.
Reports of the Secretary of the Navy—Continued.			
List of papers—Continued—			
Report of Lieutenant James M. Gilliss, conductor of the late astronomical expedition to Chili, of the progress made during the year, and present condition, &c., of the work under his charge.....	3	1	49
Report of Lieutenant John M. Brooke of the progress made in preparing his report of the survey of the route from San Francisco to China.....	3	1	50
Estimates of the office of the Secretary of the Navy and the Southwest Executive Building	3	1	52
Report and detailed estimates, &c., of the Bureau of Yards and Docks.....	3	1	55
Report and detailed estimates, &c., of the Bureau of Ordnance and Hydrography	3	1	206
Report and detailed estimates, &c., of the Bureau of Construction, Equipment, and Repairs.....	3	1	230
Report and detailed estimates, &c., of the Bureau of Provisions and Clothing	3	1	346
Report and detailed estimates, &c., of the Bureau of Medicine and Surgery.....	3	1	371
Report of the commandant of the Marine Corps and detailed estimates of the paymaster and quartermaster of the corps.....	3	1	382
General estimate (civil) of the Secretary's office and bureaus of the Navy Department.....	3	1	398
General estimate of the Southwest Executive Building.....	3	1	398
Summary of Navy estimates	3	1	399
General estimate for Navy proper.....	3	1	402
General estimate for Marine Corps.....	3	1	403
General estimate for special objects under the control of the department.....	3	1	404
Comptroller's statement of Navy appropriations, expenditures, and balances.....	3	1	405
Abstract of expenditures under the head of "contingent expenses of the Navy," as settled and allowed at the office of the Fourth Auditor of the Treasury from July 1, 1858, to June 30, 1859	3	1	410
Communicating information concerning the number and character of ships in commission, with their batteries and stations; the number of seamen and marines in service; amount expended for equipment and repair during each year from 1840 to 1860, inclusive; the cost of maintaining in commission and the wear and tear of the different classes of steam vessels of war as compared with corresponding classes of sailing vessels; the average cost of giving steam power to sailing vessels; cost of each of the steam screw ships of the Navy; of dismantling and placing in ordinary the five screw frigates and sloops last returned from cruises of two years or more; the number and location of private and public establishments, at which machinery for said vessels may be constructed, &c.; the total cost of the machinery of a steam frigate constructed by contract at private and one of the same class at the Washington navy-yard; and whether the interests of the government would be subserved by reducing the number of navy-yards; and, if so, which of them could be most advantageously dispensed with.....	4	4	1
Transmitting a statement of the number and pay of clerks and watchmen at the naval stations on board of vessels of war, &c.....	4	8	1
Transmitting information relative to changing the daily pay of master workmen at the navy-yards to salaries, &c.....	4	13	1

Subject.	Vol.	No.	Page.
<i>Reports from the Postmaster General, viz :</i>			
On the operations of the Post Office Department during the year ending June 30, 1860	3	1	417
SUBORDINATE DEPARTMENTS.			
<i>Reports of the Commissioner of the General Land Office, viz :</i>			
On the operations of the General Land Office during the year ending June 30, 1860, with an abstract thereof at page 79 of same.....	1	1	49
<i>Schedule of papers accompanying the above.</i>			
Statement of surveying operations from October 1, 1859, to September 30, 1860.....	1	1	81
Exhibit of the quantities of land prepared for market and offered at public sale during the fiscal year ending June 30, 1859, and for the quarter ending September 30, 1860.....	1	1	82
Table of sales and other disposals of public lands during the five quarters ending September 30, 1860	1	1	83
Swamp land table, exhibiting the quantity of land selected under acts of 1849 and 1850, to September 30, 1860.....	1	1	84
Like table exhibiting the quantity of land approved under same acts up to same date	1	1	85
Table showing the quantity of land patented to the several States under swamp land act of September 28, 1850.....	1	1	86
Condition of the bounty land business under acts of 1847, 1850, 1852, and 1855.....	1	1	87
Statement of sales of public lands during the first and last halves of the fiscal year ending June 30, 1860.....	1	1	88
Estimate of appropriations for salaries and contingent expenses in General Land Office during fiscal year ending June 30, 1862.....	1	1	100
Estimate of appropriations for the surveying department.....	1	1	103
Like estimate for surveying public lands.....	1	1	106
Reports of surveyors general	1	1	107
<i>Reports of the Commissioner of Indian Affairs, viz :</i>			
On the operations of the Office of Indian Affairs during the year ending June 30, 1860	1	1	235
<i>List of documents accompanying the report of the Commissioner of Indian Affairs for the year 1860.</i>			
New York agency—			
Report of Bela H. Colegrove, agent for the Indians in the State of New York.....	1	1	255
Michigan agency—			
Report of A. M. Fitch, agent for the Indians in the State of Michigan.....	1	1	256
Agency for the Indians in the vicinity of Green Bay—			
Report of A. D. Bonesteel, agent for the Indians in that vicinity	1	1	259
Report of E. A. Goodnough, teacher to the first Christian party of Oneidas	1	1	260
Report of David Lewis, teacher to the Oneidas.....	1	1	261
Report of Jeremiah Slingerland, teacher to the Stockbridges and Munsees	1	1	262
Report of Sarah J. Slingerland, teacher to the Stockbridges and Munsees.....	1	1	263
Report of Rosalie Dousman, teacher to the Menomonees.....	1	1	263
Report of Jane Dousman, teacher to the Menomonees.....	1	1	264
Report of L. Goldstucker, teacher to the Menomonees.....	1	1	264

Subject.	Vol.	No.	Page.
Reports of the Commissioner of Indian Affairs—Continued.			
Agency for vicinity of Green Bay—Continued—			
Report of Frederick Haas, farmer to the Menomonees.....	1	1	265
Report of Samuel T. Litch, miller to the Menomonees.....	1	1	265
Report of Harvey Field, blacksmith to the Menomonees....	1	1	266
Northern superintendency—			
Report of W. J. Cullen, superintendent.....	1	1	266
Report of J. W. Lynde, agent for the Chippewas of the Mississippi.....	1	1	272
Report of John D. Wren, physician to the Chippewas of the Mississippi.....	1	1	274
Report of C. K. Drew, agent for the Chippewas of Lake Superior.....	1	1	275
Report of Joseph R. Brown, agent for the Sioux of the Mississippi.....	1	1	278
Report of S. Brown, superintendent of schools for the Upper and Lower Sioux.....	1	1	287
Report of Jane S. Williamson, teacher to the Sioux.....	1	1	290
Report of T. W. Cullen, superintendent of farms to the Lower Sioux.....	1	1	291
Report of J. Nairn, carpenter for Upper and Lower Sioux.....	1	1	294
Report of Michael Iton, blacksmith to the Lower Sioux.....	1	1	295
Report of William Allen, blacksmith to the Upper Sioux....	1	1	296
Report of Charles H. Mix, agent for the Winnebagoes.....	1	1	297
Report of A. Coleman, physician to the Winnebagoes.....	1	1	300
Report of W. E. Cullen, superintendent of the Winnebago manual labor school.....	1	1	301
Central superintendency—			
Report of A. M. Robinson, superintendent.....	1	1	304
Report of A. J. Vaughan, agent for the Blackfeet.....	1	1	306
Report of Daniel F. Paris, farmer to the Blackfeet.....	1	1	309
Report of A. H. Redfield, agent for the Yancton Sioux.....	1	1	310
Report of G. B. Graff, agent for the Omahas.....	1	1	315
Report of J. L. Gillis, agent for the Pawnees.....	1	1	316
Report of R. B. Gillis, farmer to the Pawnees.....	1	1	319
Report of W. W. Dennison, agent for the Ottoes and Mis-sourias.....	1	1	320
Report of Daniel Vanderslice, agent for the Iowas and the Sacs and Foxes of the Missouri.....	1	1	323
Report of W. P. Badger, agent for the Kickapoos.....	1	1	324
Report of Thomas B. Sykes, agent for the Delawares.....	1	1	326
Report of John G. Pratt, superintendent of Delaware Baptist Mission School.....	1	1	329
Report of B. J. Newsom, agent for the Shawnees and Wy-andottes.....	1	1	330
Report of William E. Murphy, agent for the Pottawatomies.....	1	1	332
Report of Perry Fuller, agent for the Sacs and Foxes of the Mississippi and the Ottowas and Chippewas.....	1	1	333
Report of M. C. Dickey, agent for the "Kaws," or Kansas Indians.....	1	1	336
Report of Seth Clover, agent for the Weas and Pianke-shaws, Kaskaskias and Peorias, and Miamies.....	1	1	338
Southern Superintendency—			
Report of Elias Rector, superintendent.....	1	1	339
Report of Andrew J. Dorn, agent for the Osages, Quapaws, Senecas, and Shawnees and Senecas.....	1	1	344
Report of John C. Shoenmakers, superintendent of the Osage Manual Labor School.....	1	1	345
Report of James J. Killebrew, farmer to the Quapaws.....	1	1	347
Report of W. H. Garrett, agent for the Creeks.....	1	1	347
Report of R. M. Loughridge, missionary to the Creeks, and superintendent of the Tallahassee Manual Labor School...	1	1	349
Report of Samuel M. Rutherford, agent for the Seminoles...	1	1	350
Report of Douglas H. Cooper, agent for the Choctaws and Chickasaws.....	1	1	352

Subject.	Vol.	No.	Page.
Reports of the Commissioner of Indian Affairs—Continued.			
Southern Superintendency—Continued—			
Report of Rev. O. P. Stark, missionary to the Choctaws.....	1	1	354
Report of Rev. C. C. Copeland, missionary to the Choctaws.	1	1	355
Report of Rev. Wm. Cass, Simon Hancock, and Lewis Cass, native Choctaw missionaries.....	1	1	356
Report of Rev. Allen Wright, missionary to the Choctaws...	1	1	357
Report of Rev. Cyrus Byington, missionary to the Choctaws.	1	1	358
Report of C. Kingsbury, superintendent of the Chuala Boarding School.....	1	1	359
Report of George Ainslie, superintendent of Koonsha Semi- nary.....	1	1	361
Report of John Edwards of Wheelock, superintendent Female Seminary.....	1	1	362
Report of John Edwards of Wheelock, superintendent Female Seminary.....	1	1	363
Report of W. R. Baker, superintendent of Armstrong Academy.....	1	1	364
Report of F. M. Paine, superintendent of Fort Coffee and New Hope Academies.....	1	1	365
Report of F. M. Paine, superintendent of Fort Coffee and New Hope Academies.....	1	1	368
Report of Alexander Reid, superintendent of Spencer Academy.....	1	1	369
Report of Joseph Dukes, school trustee.....	1	1	370
Report of H. Balentine, superintendent of Wapanucka In- stitute.....	1	1	372
Report of J. C. Robinson, superintendent of Chickasaw Manual Labor School.....	1	1	375
Report of J. C. Robinson, superintendent of Chickasaw Manual Labor School.....	1	1	376
Report of J. H. Carr, superintendent of Bloomfield Academy.	1	1	377
Report of M. Leeper, agent for the Wichita and neighboring tribes.....	1	1	378
New Mexico Superintendency—			
Report of J. L. Collins, superintendent.....	1	1	381
Report of C. Carson, agent for the Indians within the Taos agency.....	1	1	387
Report of Silas F. Kendrick, agent for the Pueblos.....	1	1	389
Report of John Walker, agent for the Indians within the Tuscon agency.....	1	1	391
Utah Superintendency—			
Report of A. Humphreys, agent for the Indians within the "Utah" agency.....	1	1	393
Oregon and Washington Superintendency—			
Report of E. R. Geary, superintendent.....	1	1	395
Report of M. T. Simmons, agent for the Indians of Puget Sound district.....	1	1	410
Report of W. B. Gosnell, agent for the Squaksin, Nisqually, and Puyallup Indians.....	1	1	422
Report of W. B. Kimball, physician to Squaksin reserve....	1	1	425
Report of C. C. Pagett, teacher upon Squaksin reserve.....	1	1	427
Report of D. M. Mounts, Nisqually farmer.....	1	1	428
Report of John L. Perkins, carpenter upon Puyallup reserve.	1	1	428
Report of R. H. Lansdale, agent for the Klickitat, Wisham, Columbia river, Yakima, and Winatcha Indians.....	1	1	429
Report of A. J. Cain, agent for the Cayuse, Walla-Walla, Palouse, Nez Percé, and Spokane Indians.....	1	1	432
Report of Daniel Newcomb, agent for the Indians within the "Siletz" agency.....	1	1	435
Report of E. B. Ball, teacher at Siletz.....	1	1	438
Report of J. B. Sykes, sub-agent at Yaquina bay.....	1	1	438
Report of John F. Miller, agent at Grand Ronde.....	1	1	440
Report of G. H. Abbott, sub-agent for the Indians of the eastern district of Oregon.....	1	1	441

Subject.	Vol.	No.	Page.
Report of the Commissioner of Indian Affairs—Continued.			
Miscellaneous—			
Office letter to Agent Butler, of November 29, 1859, relative to the intruders upon the Cherokee neutral land.....	1	1	444
Office letter to Charles W. Blair, Esq., of March 13, 1860, relative to said intruders.....	1	1	444
Office letter to Superintendent Rector, of April 21, 1860, relative to said intruders	1	1	446
Office letter, of June 4, 1860, to Secretary of Interior relative to said intruders.....	1	1	447
Office letter, of same date, to Elias Rector, relative to said intruders.....	1	1	447
Letter of Agent Cowart, of November 5, 1860, in regard to his proceedings against said intruders.....	1	1	448
Letter of ditto, of November 9, 1860.....	1	1	449
Office circular to agents, requiring prompt rendition of their accounts.....	1	1	451
Special report of Commissioner Greenwood relative to his visit to the Cheyennes and Arrapahoes.....	1	1	452
Official instructions to the newly appointed supervising agents of California.....	1	1	454
Office letter appointing John A. Dreibelbes one of said supervising agents.....	1	1	456
Office letter appointing J. Y. McDuffie the other supervising agent.....	1	1	457
Statement showing action of office relative to applications of Indians for bounty land	1	1	458
Report of G. Bailey, disbursing clerk, upon the Indian trust fund	1	1	459
<i>Report of the Commissioner of Pensions, viz:</i>			
On the operations of the Pension Office during the year ending June 30, 1860.....	1	1	467
<i>Reports of the Commissioner of Patents, viz:</i>			
In relation to arts and manufactures for the year 1860, (Part I).....	5	7	1
In relation to arts and manufactures for the year 1860, (Part II, plates).	6	7	1
<i>Report of the Commissioner of Public Buildings, viz:</i>			
On the operations of his office during the year ending June 30, 1860, with a compendium of the same.....	1	1	483
<i>Report of the United States Architect, viz:</i>			
In relation to the cost and plan of a new jail in the District of Columbia.....	1	1	499
<i>Report of the Superintendent of the Census, viz:</i>			
In relation to the taking of the eighth census.....	1	1	501
<i>Report of the Warden of the Penitentiary of the District of Columbia, viz:</i>			
On the operations of his office during the year ending June 30, 1860, with reports of the clerk, physician, matron, and chaplain of the Penitentiary.....	1	1	505
<i>Report of the Superintendent of the Government Hospital for the Insane in the District of Columbia, viz:</i>			
On the operations of his office during the year ending June 30, 1860, with a compendium of the same.....	1	1	530

Subject.	Vol.	No.	Page.
<i>Report of the President of the Board of Directors of the Institution for the Deaf and Dumb and the Blind in the District of Columbia, viz:</i>			
On the condition and operations of the Institution during the year 1859-60	1	1	552
<i>Report of the Engineer of the Potomac water-works, viz:</i>			
On the condition and operations upon the works of the Potomac water-works in 1859-60.....	1	1	564

Page	Subject	Page	Subject
1	General	1	General
2	Particular	2	Particular
3	Particular	3	Particular
4	Particular	4	Particular
5	Particular	5	Particular
6	Particular	6	Particular
7	Particular	7	Particular
8	Particular	8	Particular
9	Particular	9	Particular
10	Particular	10	Particular
11	Particular	11	Particular
12	Particular	12	Particular
13	Particular	13	Particular
14	Particular	14	Particular
15	Particular	15	Particular
16	Particular	16	Particular
17	Particular	17	Particular
18	Particular	18	Particular
19	Particular	19	Particular
20	Particular	20	Particular
21	Particular	21	Particular
22	Particular	22	Particular
23	Particular	23	Particular
24	Particular	24	Particular
25	Particular	25	Particular
26	Particular	26	Particular
27	Particular	27	Particular
28	Particular	28	Particular
29	Particular	29	Particular
30	Particular	30	Particular
31	Particular	31	Particular
32	Particular	32	Particular
33	Particular	33	Particular
34	Particular	34	Particular
35	Particular	35	Particular
36	Particular	36	Particular
37	Particular	37	Particular
38	Particular	38	Particular
39	Particular	39	Particular
40	Particular	40	Particular
41	Particular	41	Particular
42	Particular	42	Particular
43	Particular	43	Particular
44	Particular	44	Particular
45	Particular	45	Particular
46	Particular	46	Particular
47	Particular	47	Particular
48	Particular	48	Particular
49	Particular	49	Particular
50	Particular	50	Particular
51	Particular	51	Particular
52	Particular	52	Particular
53	Particular	53	Particular
54	Particular	54	Particular
55	Particular	55	Particular
56	Particular	56	Particular
57	Particular	57	Particular
58	Particular	58	Particular
59	Particular	59	Particular
60	Particular	60	Particular
61	Particular	61	Particular
62	Particular	62	Particular
63	Particular	63	Particular
64	Particular	64	Particular
65	Particular	65	Particular
66	Particular	66	Particular
67	Particular	67	Particular
68	Particular	68	Particular
69	Particular	69	Particular
70	Particular	70	Particular
71	Particular	71	Particular
72	Particular	72	Particular
73	Particular	73	Particular
74	Particular	74	Particular
75	Particular	75	Particular
76	Particular	76	Particular
77	Particular	77	Particular
78	Particular	78	Particular
79	Particular	79	Particular
80	Particular	80	Particular
81	Particular	81	Particular
82	Particular	82	Particular
83	Particular	83	Particular
84	Particular	84	Particular
85	Particular	85	Particular
86	Particular	86	Particular
87	Particular	87	Particular
88	Particular	88	Particular
89	Particular	89	Particular
90	Particular	90	Particular
91	Particular	91	Particular
92	Particular	92	Particular
93	Particular	93	Particular
94	Particular	94	Particular
95	Particular	95	Particular
96	Particular	96	Particular
97	Particular	97	Particular
98	Particular	98	Particular
99	Particular	99	Particular
100	Particular	100	Particular

COMPANION OF PATENTS

1	General	1
2	Particular	2
3	Particular	3
4	Particular	4
5	Particular	5
6	Particular	6
7	Particular	7
8	Particular	8
9	Particular	9
10	Particular	10
11	Particular	11
12	Particular	12
13	Particular	13
14	Particular	14
15	Particular	15
16	Particular	16
17	Particular	17
18	Particular	18
19	Particular	19
20	Particular	20
21	Particular	21
22	Particular	22
23	Particular	23
24	Particular	24
25	Particular	25
26	Particular	26
27	Particular	27
28	Particular	28
29	Particular	29
30	Particular	30
31	Particular	31
32	Particular	32
33	Particular	33
34	Particular	34
35	Particular	35
36	Particular	36
37	Particular	37
38	Particular	38
39	Particular	39
40	Particular	40
41	Particular	41
42	Particular	42
43	Particular	43
44	Particular	44
45	Particular	45
46	Particular	46
47	Particular	47
48	Particular	48
49	Particular	49
50	Particular	50
51	Particular	51
52	Particular	52
53	Particular	53
54	Particular	54
55	Particular	55
56	Particular	56
57	Particular	57
58	Particular	58
59	Particular	59
60	Particular	60
61	Particular	61
62	Particular	62
63	Particular	63
64	Particular	64
65	Particular	65
66	Particular	66
67	Particular	67
68	Particular	68
69	Particular	69
70	Particular	70
71	Particular	71
72	Particular	72
73	Particular	73
74	Particular	74
75	Particular	75
76	Particular	76
77	Particular	77
78	Particular	78
79	Particular	79
80	Particular	80
81	Particular	81
82	Particular	82
83	Particular	83
84	Particular	84
85	Particular	85
86	Particular	86
87	Particular	87
88	Particular	88
89	Particular	89
90	Particular	90
91	Particular	91
92	Particular	92
93	Particular	93
94	Particular	94
95	Particular	95
96	Particular	96
97	Particular	97
98	Particular	98
99	Particular	99
100	Particular	100

REPORT

OF THE

COMMISSIONER OF PATENTS

FOR THE YEAR 1860.

ARTS AND MANUFACTURES.

VOLUME I.

WASHINGTON:
GEORGE W. BOWMAN, PRINTER.
1861.

IN THE SENATE OF THE UNITED STATES,

February 5, 1861.

Resolved, That fifteen thousand additional copies of the Annual Report of the Commissioner of Patents on arts and manufactures for the year 1860, be printed for the use of the Senate, and ten thousand copies for the Interior Department for purposes of official distribution: *Provided*, That the tabular statements and indices be printed with nonpareil type and the description of patents with brevier type, so as to complete the entire report in two octavo volumes.

ASBURY DICKINS, *Secretary*.

INDEX.
REPORT
COMMISSIONER OF PATENTS
UNITED STATES PATENT OFFICE,
January 29, 1861.

SIR: I have the honor herewith to transmit the Annual Report of this office for the year 1860, to be laid before Congress.

I am, very respectfully, your obedient servant,

S. T. SHUGERT,
Acting Com. Patents.

Hon. JOHN C. BRECKINRIDGE,
Vice President United States.

INDEX.

NOTE.—The claims are arranged in strictly numerical order, and the engravings in nearly the same order.

Invention or Discovery.	Name of Patentee.	Number.
A.		
Acids, Fatty, decomposing Fats into.....	R. A. Tilghman.....	28,315
Acids, Sulphurous, manufacture of.....	P. Marcelin and E. Ende.....	28,678
Acoustic Apparatus.....	D. D. Stelle.....	27,165
Adding Machines.....	J. Ballow.....	27,418
Adding Machines.....	T. T. Strode.....	30,264
Adding Numbers, Machine for.....	D. R. Nelson.....	28,006
Air, heating, by steam, apparatus for.....	J. Hollingsworth.....	28,578
Alarms, Burglar.....	G. W. Bigelow.....	27,772
Alarms, Burglar.....	J. C. Huntly.....	28,677
Alarms, Burglar.....	J. H. Enholm.....	28,977
Alarms, Burglar, Electro-magnetic.....	J. Haller.....	30,141
Alarms, Clock and Burglar, combined ...	G. K. Proctor.....	29,520
Alarms for doors.....	H. Behn.....	30,193
Alarms, Drawer.....	Wm. B. Card.....	26,813
Alarms, Fire.....	W. D. Grimshaw.....	27,282
Alarms, Fire.....	A. F. Cobb.....	30,613
Alarms, Fire.....	E. Ehlin.....	30,624
Alarms, Fog.....	C. L. Daboll.....	28,837
Alkalies, Caustic, preservation of.....	J. Sieberling.....	29,625
Amalgamators.....	G. W. Carter.....	27,035
Amalgamators.....	I. W. Knox.....	27,990
Amalgamators.....	J. A. Brock.....	28,136
Amalgamators.....	G. E. Mills.....	28,885
Amalgamators.....	Wm. Gluyas.....	29,545
Amalgamators.....	J. White.....	29,837
Amalgamators.....	S. E. Woodworth and J. S. Wethered ...	30,781
Amalgamators.....	J. N. Wyckoff and T. M. Fell.....	30,783
Amalgamators.....	G. M. Norton.....	30,085
Amalgamators, Gold.....	A. K. Eaton.....	30,567
Anchors, apparatus for working.....	A. Campbell.....	28,965
Anchor Shackles, second.....	Thomas Leavitt.....	26,684
Anchor Trippers.....	H. Higgins.....	26,765
Andirons.....	J. B. Logan.....	27,640
Annealing Apparatus.....	J. Worcester.....	30,174
Apples, cutting and coring.....	G. C. Wright.....	28,935
Apples, grinding.....	I. T. Carpenter.....	26,892
Apple and Potato Parers.....	J. L. Clewell, jr., and W. F. Schartz ...	30,667
Apple Parers, Corers, and Slicers.....	J. J. Parker.....	29,988
Aqueducts.....	J. Osborn.....	29,906
Augers.....	J. Blake.....	27,946
Augers.....	W. A. Ives.....	29,793
Augers.....	J. M. Hathaway.....	29,883
Augers, Hollow.....	G. M. Nye and A. T. Haviland.....	28,400
Augers, Screw, Casting.....	J. Carl and J. W. Heath.....	29,668
Augers, Tenoning.....	W. A. Clark.....	28,653
Aural Instruments.....	C. G. Page.....	30,688
Awls, Shoemakers'.....	B. T. Lane.....	27,913
Awning Fixtures.....	E. Peach.....	29,399
Axe-helves, Metal Caps for.....	A. W. Porter.....	29,192
Axes, Manufacture of.....	J. Lippincott.....	27,927
Axles, Car.....	J. Brown and J. and J. Leland.....	27,966
Axles, Car.....	W. Phelps.....	29,001
Axles, Carriage, Arms for.....	A. J. Bell.....	27,517
Axles, Lubricating Carriage.....	J. E. Emerson.....	27,785
Axles, Railroad Car.....	J. Montgomery.....	28,004
Axle-boxes.....	H. L. Castile.....	28,253
Axle-boxes, making.....	A. E. Smith.....	28,207
Axle-boxes, Railroads.....	H. Rice.....	27,738
Axle-boxes for railroad cars.....	J. Harris.....	26,673
Axle-boxes for vehicles.....	I. Holloway.....	26,672
Axle-trees, Setting.....	J. N. Arvin and S. H. Perkins.....	29,132
B.		
Baby Jumpers, Couch and Carriage.....	J. S. Brown.....	30,717
Bag Holders and Conveyors.....	C. K. Hostetter.....	30,943
Bags, Paper, making.....	G. T. Lufbery.....	28,188

Invention or Discovery.	Name of Patentee.	Number.
Bags, Travelling	T. R. Dunham	28,036
Bags, Turning, Machine for	W. V. Gee	30,808
Balances, Hydrostatic	S. Squire	26,795
Balances, Spring	W. A. Crowell	28,838
Bales, Cotton, Fastenings for	J. W. Evans	29,683
Bands for machinery	J. H. Clifton	28,350
Bands, Metallic, for cotton bales	R. W. Fenwick	30,133
Bank Notes, manufacture of	A. C. Carey	27,859
Bank Notes, Photographic	L. Eidlitz	27,116
Bank Notes, &c., Style of Engraving	J. Macdonough	30,488
Bars, Claw	G. H. Beard	28,645
Bark from Willows, &c., machines for removing	L. A. Beardsley	28,824
Bark, separating qualities of, machines for	J. Brakeley	28,554
Barometers	H. A. Clum	28,454
Barometers	L. Woodruff	28,626
Barometers	E. F. Hamann	30,061
Barrels, Heads in, method of securing	G. W. Banker	28,712
Barrels, inside of, finishing	E. Gremlee	30,811
Barrels, making	S. Roberts	30,425
Barrels, opening, tools for	D. Snedeker	28,208
Barrel Head Machines	C. B. Hutchinson	30,024
Barrel Head Machines	H. L. McNish	30,378
Barrel Heads, manufacturing	L. B. Batchelder	27,682
Barrel Heads, submerging	N. B. Cleveland	27,258
Baskets	G. R. Park	28,105
Batteries, Chain Shot	C. B. Thayer	29,331
Batteries, Voltaic Gas, construction of	M. Vergenes	28,317
Bearings, Pivot	F. C. Lowthrop	26,689
Bed Bottoms	G. T. Allen	26,878
Bed Bottoms	L. W. Buxton	28,233
Bed Bottoms	L. W. Buxton	29,540
Bed Bottoms	P. Ulmer	30,267
Bed Bottoms	W. H. Tambling	30,432
Bed Bottoms, Tightened	A. B. Stroup	27,844
Bed Canopy	I. E. Palmer	27,007
Bed and Chair Combined	G. A. Keene	29,038
Bed Cords	S. Albro	28,950
Bed Springs	J. H. Crane	27,700
Bedsteads	S. Walker	27,585
Bedsteads	R. Jenkins	28,582
Bedsteads	T. Wall	28,621
Bedsteads	J. Leigh	29,498
Bedsteads	W. Deckmann	29,678
Bedsteads	B. S. Pringle	29,913
Bedsteads, Fan Ventilating	F. Moore	30,492
Bedsteads, Folding	D. Bach and K. Krenkel	27,203
Bedsteads, Folding	S. Gillespie	27,284
Bedsteads, Folding	William C. Lutz	27,299
Bedsteads, Folding	E. Cotty	28,127
Bedsteads, Folding	A. M. Dye	30,304
Bedsteads, Folding	G. D. Sargent	30,888
Bedsteads, Folding Case	E. Whitney	30,101
Bedsteads, Invalids'	S. Grantz	26,666
Bedsteads, Invalids'	W. Swift	27,169
Bedsteads, Invalids'	A. W. Chase	28,254
Bedsteads, Secretary	G. Gage	29,265
Bedsteads, Sofa	J. F. C. Peikhar	27,234
Bedsteads, Sofa	W. H. Tendler	27,871
Bedsteads, Sofa	W. H. Tendler and J. F. Moeshlin	29,832
Bedsteads, Sofa	S. Pearson	30,754
Bedsteads, Spring	D. R. Lightner	29,892
Bedsteads, Ventilating	H. N. Henley	26,946
Bedsteads, Wardrobe	W. Berg	27,329
Bedstead Fastenings	A. Roda	26,924
Bedstead Fastenings	P. Miles	28,326
Bedstead Fastenings	R. Hubbard	28,276
Bedstead Fastenings	H. F. Smith	29,628
Bedstead Fastenings	A. Bechtol	30,286
Beehives	J. Meese, jr.	27,004
Beehives	A. W. Geaheart	27,022
Beehives	W. A. Flanders	27,408
Beehives	R. Hawkins	27,980
Beehives	J. S. Black	28,249
Beehives	K. P. Kilder	28,871
Beehives	N. Brasher	29,356
Beehives	M. McConnigle	29,394
Beehives	W. Hyde	29,491
Beehives	D. Arndt	29,658
Beehives	E. S. Bacon	29,753
Beehives	S. Maitland	29,799
Beehives	C. Williams	29,848
Beehives	J. Jacobs	30,143
Beehives	S. R. Bryant	30,202

Invention or Discovery.	Name of Patentee.	Number.
Beehives.....	H. M. Shaffer	30,254
Beehives.....	J. W. Palmer and J. K. Leedy.....	30,341
Beehives.....	J. C. Pratt	30,984
Beer, Factitious.....	F. Luedke	30,147
Beer Measures.....	E. Bagot.....	26,807
Beer Powders.....	J. McKellar	28,289
Bellows.....	J. B. and J. A. Maxwell	27,062
Bellows, Forge	W. Thompson	27,936
Bell Attachments.....	A. E. Taylor.....	30,509
Bell Pulls.....	C. J. Bradbury	27,330
Bells, Dumb.....	D. F. Savage.....	28,505
Bells, hanging.....	T. H. Bell	27,880
Bells, hanging.....	G. R. Meneely.....	30,338
Bells, ringing.....	B. Kilt.....	28,586
Bells, ringing, Apparatus for	J. Harrison.....	29,784
Belts, Lacings for.....	H. A. Alden.....	29,348
Belts, Pulley, measuring strain on, machine for.....	J. B. Duff and T. W. Keating.....	28,743
Belt Fastenings.....	G. W. Blake	28,033
Belt Punches.....	C. D. Wheeler	26,940
Belt Skippers.....	J. C. Goar.....	29,587
Belting.....	H. Underwood	27,846
Belting, Elastic.....	D. C. Gately	27,440
Belting, Elastic.....	J. and S. Peatfield.....	27,471
Belting, India Rubber, Manufacture of.....	D. C. Gately	26,669
Belting, Rubber, making.....	T. J. Mayall.....	27,001
Belting, Rubber, making	T. J. Mayall.....	27,730
Belting, Rubber, Manufactures of.....	D. C. Gately	26,982
Belting Machines.....	T. J. Mayall.....	27,060
Berths, Ships', Oscillating.....	T. S. Brown	29,763
Biers.....	W. Scarlett	30,251
Billiard Cues, attaching leathers to.....	W. L. Aldrick.....	27,093
Bills of Fare.....	W. A. Bury.....	28,152
Bills of Fare, Frames for.....	C. Gloyd.....	30,311
Binding Engravings, &c.....	W. T. Anderson.....	30,277
Bits, Plane, securing.	T. M. Richardson.....	30,248
Bits, Stock.....	W. Lyon.....	30,487
Black Boards, Composition for Covering.....	J. B. Rowell	29,552
Blinds, Window, for making.....	C. W. Smith.....	28,908
Blinds, Window, operating the Slats of.....	J. D. Burdick.....	27,520
Blind Fasteners.....	W. S. Kirkham	30,581
Blind Fasteners, Window.....	A. T. Finch.....	30,397
Blind Fastenings.....	J. J. Henry.....	30,730
Blind Operators.....	L. N. Fay and W. Mason.....	27,119
Blind Operators.....	J. Johnson	27,295
Blind Rods, wiring.....	J. Coover	29,467
Blind Slats, Machines for making.....	S. Jackson.....	28,809
Blind Slats, Machines for making	H. B. Smith.....	30,429
Blind Slats, Machines for making Window	H. W. Farmer.....	27,976
Blocks, Ships', stretching Straps of.....	E. Mack	30,535
Blowers.....	T. C. Richards.....	26,863
Blowers.....	R. Lapham.....	28,758
Blowers.....	P. H. Roots	30,157
Blowers, Fan.....	H. Sweetapples.	29,417
Blow Pipe operations, Composition for Supports in.....	J. B. Hyde	30,680
Boards, Machine for Thinning.....	S. Case	29,861
Boats.....	P. Davis	26,657
Boats convertible into land carriages.....	P. Davis	30,618
Boats, Life.....	S. Mills.....	29,508
Boats, Life, Surf.....	J. R. Grace.....	27,362
Boats, lowering, apparatus for.....	W. Flowers and Z. S. Patton	29,264
Boats, Ships', attaching and detaching.....	R. S. Stubbs.....	30,698
Boats, Ships', lowering and detaching	J. A. Davis.....	29,064
Boats, suspending	C. H. Hasker.....	28,478
Boilers	C. Godfrey	30,917
Boilers for cooking stoves	A. S. Sterling	28,789
Boilers for hot water, Apparatus in	E. B. Cherevoy	27,858
Boilers for heating buildings.....	C. F. Hitchings.....	28,272
Boilers for preparing paper stuff	C. S. Buchanan	28,062
Boilers, Locomotive	J. Thompson	28,520
Boilers, Steam.....	B. F. Campbell	30,957
Boilers, Steam.....	S. Solliday	30,992
Boiler Feeders for Steam Engines.....	E. A. Woods	29,028
Boiler Plates, rivetting.....	J. B. Henry	26,846
Boiling and Condensing Apparatus.....	G. S. G. Spence	29,414
Boiling and Distilling, Apparatus for.....	W. Hoffmire	29,376
Bolsters, Swinging, for car trucks.....	M. C. Andrews.....	28,545
Bolting Chests.....	M. C. Coggsell and J. McKiernon.	28,654
Bolting Flour.....	W. Halderman	29,483
Bolts, Door.....	N. W. Bonney	28,827
Bolts for door locks	E. Parker	27,064
Bolts, Flush.....	W. R. Carnes	28,346
Bolts, Heading	H. Abbott	27,943
Bolts, Shutter.....	A. Reeve.....	30,091

Invention or Discovery.	Name of Patentee.	Number.
Bolts for store shutters	W. C. Fisher.	28,844
Bomb Shells.....	W. Rice.....	29,995
Bone Black, Apparatus for revivifying	W. Mitchell.....	27,462
Bone Black, Apparatus for washing	C. Kinzler.....	29,128
Bonnet Frames, manufacture of.....	R. T. Wilde	28,028
Bonnet Fronts, Frames for	G. A. Cox.....	26,836
Bonnets	A. Henri	28,082
Books, binding	T. Towndrow.....	28,521
Book and Paper Trimming Machines	G. Utley.....	29,532
Boom Jaws, Elastic Lining for.....	O. P. Rowland	28,608
Boots, Congress.....	H. S. Holmes.....	28,754
Boots, crimping, Machines for.....	J. S. Nolen and C. C. Hinckman	27,561
Boots, crimping, Machines for.....	R. Warren	27,586
Boots, crimping, Machines for.....	P. Shaw.....	30,502
Boots, Gaiter	C. K. Bradford.....	30,097
Boots, Tools for trimming.....	L. C. Rogers.....	30,427
Boots, Vamps of, cutting	E. L. Vertrees.....	27,173
Boots, Shoes, and Overshoes.....	W. S. McEwen.....	27,918
Boots and Shoes	N. C. Lewis, jr.....	29,344
Boots and Shoes	L. R. Blake	29,562
Boots and Shoes	J. M. Allen.....	30,034
Boots and Shoes	S. F. Dexter.....	30,391
Boots and Shoes	H. Port and E. Surgi.....	30,419
Boots and Shoes, Cleaning Apparatus for.....	J. Chesley.....	28,736
Boots and Shoes, Hand Machines for pegging	F. J. Vittum.....	30,846
Boots and Shoes, Jointed Tips for	G. A. Mitchell.....	28,395
Boots and Shoes, Manufacture of.....	F. D. Ballou.....	26,808
Boots and Shoes, Manufacture of.....	L. R. Blake.....	29,561
Boots and Shoes, skiving counters, Machines for	W. A. Bacon.....	28,531
Boot and Shoe Wipers.....	J. K. Stamun	28,614
Boot-jacks.....	G. Wheeler	28,927
Boring Artesian Wells, Apparatus for.....	J. Taney	27,935
Boring Brush Hooks.....	T. Mitchell.....	26,778
Boring or Mortising Machines, Feed Motion for	J. M. Kendall	27,134
Boring Wells, Implements for	J. M. Butler.....	27,268
Bosom Expanders.....	D. M. Church and C. H. Ellsworth	28,155
Bosom Expanders, Shirt.....	S. J. Shaw	30,842
Bottles	J. N. Bordine.....	29,563
Bottles	J. Maurer.....	29,611
Bottles, Apparatus for filling.....	C. A. Gregory.....	29,781
Bottles, Faucets for	J. Hiney.....	30,920
Bottles, forming screws in necks of, Tools for.....	J. Focer.....	30,106
Bottles, Glass, Tools for forming necks and orifices of.....	R. MacLardy.....	27,333
Bottles for indellible ink, Cases for.....	E. Daniels.....	29,469
Bowls, Wooden, making	R. Simonds and G. N. Goodspeed.....	29,411
Boxes, Ballot.....	G. L. Bailey.....	28,339
Boxes, Ballot, Apparatus for detecting fraud in.....	M. I. Shinn.....	30,503
Boxes, Bonnet.....	C. A. Taylor	28,916
Boxes for carriage wheels	W. Sharp.....	27,314
Boxes, Crank.....	G. Westinghouse	27,588
Boxes, Core	J. S. Harper	28,574
Boxes, Cutting	C. Sewerkrop	29,524
Boxes, Drop Letter	J. North.....	27,466
Boxes for dropping sugar	A. T. Ballantine.....	30,516
Boxes, Game	S. F. Brooks.....	28,733
Boxes, jointing	W. Duryea.....	29,959
Boxes, Letter.....	G. C. Jenks	30,324
Boxes, Mitre	H. B. Nash	30,027
Boxes, Porter Bottle.....	G. W. Righter	28,606
Boxes, Spelling.....	D. F. Dunham.....	30,622
Boxes, Steam Stuffing, for revolving rolls	H. Campbell.....	28,648
Boxes, Tin, making.....	C. J. Haywood	28,634
Boxes, Tobacco	A. Friedrich and C. Walter	29,152
Boxes, Tobacco	H. Kurth, F. Dahis, and C. Rabitaille.....	29,387
Boxes, Wooden, Machines for finishing.....	H. A. Jones	28,038
Box Rollers for printers	H. J. Spiller	28,514
Bracelet Fastenings.....	J. Bissinger.....	27,264
Bracelets, manufacture of	G. Sanford	30,250
Braces for harness breeching, and breast plates.....	E. Bricket.....	27,098
Braces, self-adjusting, for jack screws or other hoisting apparatus.....	E. W. Cady	29,951
Braces, Spiral	L. B. Wright	30,601
Brackets, curtain cords.....	T. S. Pye.....	30,985
Brackets for railroad car trucks.....	T. F. Allen	27,608
Braiding Machines.....	E. B. Day	27,039
Brakes, Car	E. F. Jewett.....	28,087
Brakes, Car	H. A. Mears.....	28,098
Brakes, Car	H. W. Norvill.....	29,712
Brakes, Car	P. Keffer.....	30,946
Brakes, Carriage.....	E. Behr.....	29,453
Brakes, Carriage, Self-acting.....	A. Larowe	27,639
Brakes in city railroad cars.....	R. W. Jenks, jr., and F. A. Steere.....	27,910
Brakes, Friction, for bobbins	T. Estes.....	30,725

Invention or Discovery.	Name of Patentee.	Number.
Brakes, Hemp.....	J. Mills, Jr.....	28,497
Brakes, Hemp.....	E. M. Lacy.....	29,388
Brakes, Hemp.....	R. J. Gatling.....	29,875
Brakes, Hemp.....	I. Scoville.....	30,161
Brakes, Hemp.....	E. Guile.....	30,402
Brakes, Horse-power.....	T. Harvey and N. J. Beecker.....	29,280
Brakes, Railroad.....	C. R. Davidson.....	27,038
Brakes, Railroad.....	N. Hodge.....	28,670
Brakes, Railroad.....	J. H. Steiner.....	28,817
Brakes, Railroad.....	C. F. Langford.....	28,990
Brakes, Railroad Car.....	M. Obermiller.....	26,702
Brakes, Railroad Car.....	A. Bean.....	27,344
Brakes, Railroad Car.....	E. B. Turner.....	27,486
Brakes, Railroad Car.....	W. Somerville, Jr.....	29,725
Brakes, Railroad Car.....	R. W. Hix.....	30,921
Brakes, Self-acting, disengagement of.....	W. A. Gibson.....	27,045
Brakes, Sleigh, Self-acting.....	J. Dutcher.....	29,251
Brakes, Wagon.....	J. H. H. Bennett.....	29,232
Brakes, Wagon, Self-acting.....	J. Dutcher.....	26,896
Brakes, Wagon, Self-acting.....	G. W. Morgan.....	27,558
Brakes, Wagon, Self-acting.....	W. May.....	28,636
Brakes, Wagon, Self-acting.....	H. W. Norville.....	29,299
Brakes, Wagon, Self-acting.....	G. Buchanan.....	29,764
Bread, Manufacture of.....	B. Garvey.....	29,158
Bread Slicers.....	H. F. Bond.....	27,199
Bread Slicers.....	J. Stilley.....	27,315
Bread Slicers.....	L. W. Baker.....	29,558
Bricks, Fire.....	E. Seavey.....	28,692
Brick Machines.....	L. Kirk.....	26,997
Brick Machines.....	I. M. Gattman.....	29,036
Brick Machines.....	J. Hotchkiss.....	29,171
Brick Machines.....	W. Wood.....	29,645
Brick Machines.....	W. S. Wallace.....	29,834
Brick Machines.....	J. Parsons.....	30,541
Bridges, Automatic Draw, for Canals.....	G. C. Bovey.....	28,148
Bridges, Draw, Self-acting.....	L. Scheider and J. A. Montgomery.....	29,917
Bridges, Floating.....	T. Schofield.....	27,571
Bridges, Iron.....	J. P. Fisher.....	28,845
Bridges, Truss.....	G. O. Bishop.....	27,963
Bridges, Truss.....	J. L. Jones.....	30,577
Bridges, Truss, frame for.....	E. Jacobs.....	26,680
Bridges, Truss, Plates for securing the chords, braces, &c., of.....	F. C. Lowthrop.....	27,457
Bridle Bits.....	W. F. McWilliams.....	26,804
Bridle Bits.....	H. Crane.....	28,563
Bridle Bits.....	W. F. and W. R. Johnson.....	29,284
Bridle Bits, attachment for.....	J. D. Tracey.....	30,510
Bridle Reins.....	W. O. Williams.....	27,492
Brushes.....	W. Tusch.....	28,422
Brushes, Fly or Fan.....	M. Laveen.....	27,814
Brushes, Hair.....	J. R. Ingersoll.....	28,375
Brushes, Hair, Blocks for Shaping.....	A. G. Mitchell.....	27,005
Brushes, Machines for Making.....	J. Ruegg.....	30,353
Brushes, Machines for Making.....	J. Ruegg.....	30,693
Brushes, Nail.....	W. Thomson.....	29,419
Brushes, Tooth.....	H. N. Wadsworth.....	28,794
Brooms.....	T. Langdon and C. Weitman.....	29,179
Brooms.....	W. H. Towers.....	29,926
Brooms or Brushes.....	J. H. Power.....	29,099
Brooms, Metal Heads for.....	H. G. Smith.....	27,746
Buckets, Collapsible.....	C. W. Curtis.....	30,465
Buckets for Removing Coal, &c.....	J. S. Lloyd.....	27,993
Buckets, Well.....	D. P. Farnham.....	27,708
Buckles.....	J. C. Hall.....	27,714
Buckles.....	S. S. Hartshorn.....	29,270
Buckles.....	J. Tiebout.....	29,332
Buckles, Hame Tugs and.....	J. S. Topham.....	28,700
Buckles, Harness.....	J. U. Covel.....	29,361
Buckwheat, &c., Machine for Cleaning.....	J. H. Reed.....	29,940
Buildings, Machine for Moving.....	S. Wells.....	28,445
Buildings, Ventilating.....	S. M. Stone.....	30,938
Bundling kindling wood, Machines for.....	W. S. Williams.....	30,790
Bureaus.....	J. H. Better.....	26,881
Burners, Gas.....	G. W. Thompson.....	28,113
Burners, Gas.....	S. E. Woodworth and J. S. Wethered.....	28,708
Burners, Gas.....	W. Wright.....	28,709
Burners, Gas.....	J. McGlensey.....	28,761
Burners, Gas.....	A. G. Hamaker.....	29,486
Burners, Gas.....	H. H. Dodge.....	30,470
Burners, Gas, regulators for.....	W. Mallerd.....	30,917
Burners, Hydro carbon.....	M. L. Callender.....	30,703
Burners, Vapor.....	E. H. Anderson.....	27,676
Burners, Vapor.....	L. B. Hopkins and E. H. Anderson.....	27,718

Invention or Discovery.	Name of Patentee.	Number.
Burners, Vapor	O. F. Morrill	27,732
Burners, Vapor	W. N. Browne	28,250
Burners, Vapor	H. Johnson	30,578
Burners for vapor lamps	T. Connelly	26,888
Burners for vapor lamps	A. Geiger	26,983
Burners for vapor lamps	H. W. Dopp and W. S. Mead	27,211
Burners for vapor lamps	J. L. Butler, W. S. Horsford, and D. W. Smith	27,346
Burners for vapor lamps	E. Trittin	28,333
Burnishing Machines	A. M. White	30,707
Butts, Post	J. Holland	28,275
Butter, Printing	J. S. Miller and S. L. Megand	28,394
Butter Workers	L. W. Stiles	28,312
Butter Workers	W. H. Wiley	28,706
Butter Workers	C. A. Boynton	29,135
Butter Workers	L. S. Ingraham	29,492
Buttons	G. A. Meacham	26,776
Buttons	S. Krom	28,587
Button Holes, Apparatus for cutting	F. S. Leyboldt	30,925
C.		
Cables, Chain, Elastic or surge springs for ship's	A. H. Wright	27,505
Cables, Surge, reliever for	J. Bingham	29,338
Calculi, Apparatus for removing	W. A. Dudley	30,471
Calendars, Counting-house	J. Bryner	27,267
Calendars, Pocket	H. C. Foote	29,156
Calipers	C. D. Sutton	26,716
Calligraphs	C. Thurber	30,777
Cameras, Photographic	A. Semmendinger	27,241
Cameras, Photographic	E. M. Corbett	28,739
Cameras, Photographic	A. Semmendinger	29,523
Cameras, Photographic	S. Wing	30,850
Canal and river locks	J. Davis	30,564
Candles, Composition for coating	C. Morfit	26,780
Candles, Machines for making	M. Massey	27,995
Candles, manufacture of	H. Haverson	26,763
Candles, Moulding Apparatus for	G. A. Stanley	28,209
Candles, Mould Boxes for	G. A. Stanley	28,210
Candles, moulding	G. A. Stanley	26,797
Candles, moulding	G. A. Stanley	26,798
Candles, moulding	G. A. Stanley	29,416
Candles, moulding	F. Meyrose	29,506
Candles, moulding	A. Meucci	30,180
Candles, moulding	T. King	30,605
Candles, Moulding Machines for	W. Thomas	27,763
Candlesticks	H. E. Rogers	29,314
Candle Wicks	J. H. Tatum	29,729
Canes for physicians	S. T. Trowbridge	26,721
Canes and Seats, combination of	A. Crow	28,160
Cane Coverers	J. Allison	27,339
Cane Coverers	E. H. Angamar	29,842
Cane Juices, Applying Sulphurous Acids to	T. Byrne	29,860
Cane Juices, clarifying	P. Marceline and E. Eude	28,380
Cane Juices, Defecating Apparatus for	E. H. Wheeler	28,225
Cane Juices, desiccating	D. F. Boyd	27,033
Cane Juices, evaporation of	R. Wright	30,401
See also Saccharine Juices.		
Cannons, Toy	J. O. Conch	28,066
Cans, Exhausting and Sealing, Air-pumps for	W. Y. Gill	29,582
Cans, &c., forming grooves in the necks of	J. D. Willoughby	29,739
Cans, Fruit, sealing	J. M. Cooper and W. C. Haller	29,544
Cans, Oil	W. C. Arther	27,869
Cans, Oil	J. Jackson, Jr.	29,377
Cans, Paint	G. M. Bligh	27,265
Cans, Paint	J. W. Masury	29,090
Cans, Paint	E. A. Leland	29,651
Cans, Paint	W. L. Gilroy	30,310
Cans, Preserve	W. H. Harn	28,366
Cans, Preserve	T. Sellers	28,413
Cans, Preserve	A. T. Twing, E. Wood, and W. Elderhorst	28,424
Cans, Preserve, sealing	W. W. Paddock	30,585
Cans, Preserve, Stoppers for	Wm. T. Patton	26,820
Cans, Sealing, Apparatus for	H. Y. Wilders	30,440
Cans, Tin, wiring	T. Evans	30,860
Caoutchouc and Allied Gums, Rollers for making	T. Sault	27,160
Caoutchouc, Composition formed of	A. Wilmann	27,251
Caoutchouc, mode of holding Sockets during vulcanization of	F. D. Hayward	30,787
Caoutchouc, vulcanizing	A. K. Eaton	27,706
Caoutchouc, vulcanizing	C. T. Harris	27,798
Caoutchouc, vulcanizing	S. W. Warren	28,428
Caoutchouc, vulcanizing	O. Falke and A. C. Richard	30,807

Invention or Discovery.	Name of Patentee.	Number.
Caps, Felt, seamless forms for forming	J. L. Bridge and W. B. Lodge.....	28, 149
Caps, Fronts of, binding.....	L. Londinsky.....	28, 878
Caps, Metal, making, for boxes.....	C. Diedrich and W. T. Slocum.....	27, 756
Caps, Military.....	J. S. Smith.....	29, 724
Caps, &c., Sheet Metal, making.....	O. Newton.....	28, 397
Capstans, Portable, for mole ploughs.....	A. Little and others.....	30, 015
Cards, Machine, cleaning	H. Woodman.....	27, 495
Cards, Reading	H. F. Bond.....	27, 266
Carpenter's Square	J. Hathen.....	28, 859
Carpet Beaters and Cleaners.....	A. Cutter and E. S. Wright.....	27, 780
Carpet Cleaners.....	H. L. Nichols.....	28, 398
Carpet Dusters	J. Rolls.....	30, 590
Carpet Lining, making.....	J. R. Harrington.....	29, 970
Carpet Stretchers	H. M. Hartshorn.....	28, 858
Carpet Sweepers	D. Hess.....	29, 077
Carpets, laying and stretching, Tools for	F. Cist, W. Kossak, and W. H. Godfrey...	28, 650
Carriages.....	G. W. Efner and S. A. Sperry.....	29, 866
Carriages.....	E. S. Wicklin and J. D. Weaver.....	29, 931
Carriages, Bodies of.....	E. Kirch.....	29, 386
Carriages, Extension.....	J. A. Naylor.....	29, 902
Carriages, Gun.....	J. J. Walsh.....	30, 186
Carriages, Steam.....	J. V. Merrick.....	27, 920
Carriages, Steam Land.....	C. H. Baker.....	28, 955
Carriages, Tops of	J. M. Freeman.....	27, 121
Carriage-Tops, movable, attaching to	J. S. Belcher.....	29, 049
Cars, City Railroad.....	W. C. Allison.....	26, 730
Cars, City Railroad.....	W. C. Allison.....	28, 530
Cars, City Railroad.....	J. Harris, Jr.....	29, 882
Cars, City Railroad.....	J. Grice and R. H. Long.....	30, 918
Cars, City Railroad, conveying, over obstructions	P. J. Bideman.....	30, 289
Cars, City Railroad, Running Gear of.....	J. Grice and R. H. Long.....	27, 217
Cars, City Railroad, starting.....	S. N. Sanford.....	27, 742
Cars, City Railroad, stopping and starting.....	E. S. Ritchie.....	29, 007
Cars, City Railroad, stopping and starting.....	J. H. Wygant.....	29, 536
Cars, coupling and uncoupling.....	W. A. Herrick.....	28, 751
Cars, Iron	R. Montgomery.....	29, 510
Cars, Iron Railroad	J. Miner and S. Merrick.....	26, 777
Cars, Lights for.....	R. Cathcart.....	30, 297
Cars, Railroad.....	J. H. Kaufman.....	27, 547
Cars, Railroad	S. J. Seeley.....	30, 041
Cars, Railroad, Apparatus for heating.....	J. Pine.....	30, 347
Cars, Railroad, Apparatus for ventilating and warming.....	J. J. Watson, W. Hardiker, and T. Toye..	30, 996
Cars, Railroad, Bearings for	D. R. Pratt.....	30, 547
Cars, Railroad Cattle	J. B. Shafer.....	29, 409
Cars, Railroad, dumping.....	A. B. Cooley.....	28, 969
Cars, Railroad, framing of.....	T. M. Mullen.....	27, 734
Cars, Railroad, Heaters for	W. Pauli.....	30, 753
Cars, Railroad, Metallic.....	J. A. Roebling.....	30, 426
Cars, Railroad, propelling	J. Busser and J. B. Harmer.....	28, 153
Cars, Railroad, propelling	J. A. Bennet.....	30, 287
Cars, Railroad, Running Gear for	R. Hornbrooke.....	27, 982
Cars, Railroad, stopping and starting.....	F. C. Kutt.....	29, 700
Cars, Railroad, transferring from one Track to another.....	J. Ashenfelder.....	30, 284
Cars, Railroad, ventilation of.....	E. B. Forbush.....	27, 212
Cars, Railway, for passengers.....	T. Castor.....	27, 203
Cars, Sleeping	J. B. Sutherland.....	29, 635
Cars, transferring from one Track to another	W. Wharton, Jr.....	30, 100
Cars for transporting Cattle, &c.....	L. Swearingen.....	28, 517
Car Bodies with Trucks, connecting.....	C. S. Moore.....	28, 095
Car Frames, Railroad, with metallic joints	T. L. Nichols.....	30, 833
Car Trucks, Brackets for Railroad.....	T. T. Allen.....	27, 608
Car Trucks, Railroad, swinging bolsters for	M. C. Andrews.....	28, 545
Cartridges	B. B. Hotchkiss.....	29, 080
Cartridges, Cases for.....	G. P. Foster.....	27, 791
Cartridges, Cases for.....	J. P. Lindsay.....	29, 287
Cartridges, Cases for, forming	C. Sharps.....	30, 647
Cartridges, Cases for Percussion, Machines for making.....	E. Allen.....	27, 094
Cartridges for fire-arms.....	J. W. Cochran.....	27, 428
Cartridges, Metallic.....	E. Allen.....	30, 109
Cartridges, Metallic, filling	H. Smith and D. B. Wesson.....	27, 933
Cartridges, packing	C. Sharps.....	29, 108
Carts, Coal	R. Heckscher.....	27, 049
Carts, weighing.....	G. M. Barth.....	27, 184
Casks, Metallic	W. B. Sealife.....	28, 014
Casters, Chair	T. Fay.....	27, 792
Casters, Furniture	J. A. Stafford.....	30, 505
Catamenial Bandages	F. Dashis and F. Doermer.....	29, 362
Cattle Breachy, Apparatus for.....	J. P. Ledy and W. Boyers.....	28, 286
Cements	H. Billings.....	28, 055
Cements	C. Fricke.....	28, 070
Cements	C. W. Fricke.....	28, 464
Cements	P. A. Letourneur.....	29, 979
Cements for roofing	J. F. Hammond.....	30, 919

Invention or Discovery.	Name of Patentee.	Number.
Cements, Silicated.....	G. E. Vanderburgh.....	28,541
Centre Boards for vessels.....	D. C. Gerard.....	28,979
Chains.....	P. D. Cummings.....	28,630
Chains.....	J. Blocher.....	30,797
Chains, Elastic or Surge Spring, for ships' cables.....	A. H. Wright.....	27,505
Chains, Gold, making.....	I. Lindsley.....	29,503
Chains, Link.....	G. W. N. Yost.....	30,019
Chains, Link.....	J. P. Kirk.....	30,632
Chains, Pattern for Loom.....	B. H. Jenks.....	29,283
Chains from sheet metal, making.....	L. Towne.....	26,801
Chains for timber-bending machines.....	L. Heywood.....	27,447
Chains, Watch.....	C. B. Carpenter.....	28,735
Chair Bottoms, Metallic.....	V. Stockton.....	29,553
Chair and Crib combined.....	S. Ray and M. R. Shatters.....	27,069
Chairs, Dental.....	V. Van Vleck.....	30,706
Chairs, Dental, construction of.....	J. Ask.....	29,936
Chairs, Folding.....	H. J. Pratt.....	30,858
Chairs, Folding.....	J. H. Swan.....	29,750
Chairs for invalids.....	C. Messenger.....	30,149
Chairs, Joint, for railroads.....	J. H. Banta.....	27,512
Chairs, Railroad.....	I. W. Bowers.....	27,424
Chairs, Railroad.....	I. W. Wetmore.....	28,321
Chairs, Railroad.....	D. A. Hopkins.....	30,476
Chairs, Railroad, making.....	D. Eynou.....	30,673
Chairs, Reclining.....	S. D. Carman.....	27,521
Chairs, Reclining.....	S. D. Woodbury.....	27,663
Chairs, Recumbent.....	P. J. Hardy.....	30,877
Chairs, Rocking.....	H. J. Coster.....	28,159
Chairs, Rocking, convertible into Cradles.....	R. H. Ewing.....	28,166
Chairs, Self-adjusting Reclining.....	M. Stevens.....	27,483
Chairs or Settees.....	G. F. Buckley.....	30,665
Charts, Marine, method of finding courses and bearings on.....	E. R. Knorr.....	28,089
Cheese, manufacture of.....	W. McAllister.....	30,638
Cheese Vats.....	W. Ralph.....	30,156
Chest, Flour.....	I. R. Shank.....	29,319
Chimney.....	B. W. Taber.....	29,330
Chimney, Micah, for lamps.....	J. Y. Humphrey.....	29,172
Chimney Caps.....	T. J. Fitzpatrick.....	29,262
Chimney Cowl.....	G. Millard.....	28,291
Chimney Tops, Iron.....	J. Pettingell.....	30,345
Chisels for opening boxes.....	D. N. Dunzack.....	28,848
Choppers, Meat.....	H. D. Musselman.....	27,334
Chucks, Centring, for lathes.....	Eliz'th Keagg.....	27,598
Chucks and Counter Sinks combined.....	D. Agerbright.....	29,657
Chucks for cutting disks of paper, &c.....	M. Kaefer.....	27,810
Chucks, Drill.....	J. Fox.....	27,044
Churns.....	I. P. Fitch.....	26,841
Churns.....	D. C. Brown.....	26,880
Churns.....	L. Day.....	26,970
Churns.....	E. Ward.....	27,175
Churns.....	A. Willson.....	27,181
Churns.....	E. B. Clement.....	27,205
Churns.....	A. W. Cunningham.....	27,276
Churns.....	D. Newbrough.....	27,377
Churns.....	J. H. Hardie.....	27,446
Churns.....	D. H. Wiswell.....	27,504
Churns.....	P. Embree.....	27,536
Churns.....	W. Morgan.....	27,559
Churns.....	J. Sangster.....	27,570
Churns.....	D. Deshorn, 2d.....	27,701
Churns.....	E. Lynch.....	27,864
Churns.....	S. P. Dunham and A. Hipple.....	27,894
Churns.....	J. Mitchell.....	27,927
Churns.....	W. B. Gordnier.....	28,170
Churns.....	R. G. Holmes.....	28,177
Churns.....	G. H. Van Vleck.....	28,219
Churns.....	J. W. Evans.....	28,462
Churns.....	D. M. Wooden.....	28,528
Churns.....	N. D. Ross.....	28,607
Churns.....	O. W. Stanford.....	28,696
Churns.....	H. Abbott.....	28,723
Churns.....	S. A. Kerr.....	28,757
Churns.....	C. Wright and W. Phelps.....	28,802
Churns.....	A. B. Cooper.....	28,970
Churns.....	L. Bissell.....	29,052
Churns.....	J. Paff.....	29,189
Churns.....	J. Park.....	29,397
Churns.....	D. Sherman and R. W. Fenwick.....	29,445
Churns.....	J. W. Buell.....	29,460
Churns.....	S. Hutchins and J. D. Leach.....	29,597
Churns.....	J. W. Kellberg.....	30,409
Churns.....	W. W. Reid.....	30,424

Invention or Discovery.	Name of Patentee.	Number.
Churns	H. A. Nevers and C. Ross	30,686
Churns	J. Pike	30,930
Churns	D. T. Ward	30,941
Churns, Dashers for	A. C. Vaughn	27,396
Churns, Dashers for	J. J. Watson	30,438
Churns, Dashers for, fastening blades of	S. T. Lamb	30,411
Chutes for river and canal navigation	A. Livermore	30,739
Cigars	I. Lindsley	29,436
Cigars, Heading Sockets for	T. Thorp	27,484
Cigars, Machines for making	T. Thorp	28,115
Cigars, Machines for making	F. Witerich	31,002
Cigars and Matches, Cases for	P. J. Clark	27,693
Cigar Racks for hats	F. I. Miller	28,763
Clamps for Bonnet Frames	H. A. Reynolds	28,131
Clamps, Breech	G. Cooper	27,592
Clamps, Carpenter's	J. Cadwell	27,968
Clamps, Carpenter's	C. L. Jones	30,735
Clamps, Clevis for making	V. M. Chafee	26,968
Clamps for holding cylinders to be polished	G. Williamson	30,660
Clamps, Saw	J. H. Dunbar	29,956
Clapboards	A. A. Wilder	26,803
Clasps for bustle hoops	F. A. Otis	26,876
Clevis	F. Sigrist	30,766
Clocks	W. B. Barnes	30,558
Clocks, Adjusting, vertically	J. F. Keeler	28,088
Clocks, Calendar	E. M. and J. E. Mix	27,023
Clocks, Calendar	E. Prichard	28,603
Clocks, Calendar	T. T. Strode	30,166
Clocks, Pendulum	G. M. Phelps	29,097
Clock Weights	B. F. Bond	27,684
Cloth, Dish, Holders	W. J. Johnson	27,225
Cloth, Drying, Machinery for	B. Sexton	28,202
Cloth, Elastic, Manufacture of	H. H. Day	28,456
Cloth, Marking, in Sewing machines, Mechanism for ..	H. W. Fuller	28,633
Cloth, Stretching, Machines for	E. C. Cleveland	30,801
Clothes Dryers	B. B. Hawse	26,674
Clothes Dryers	R. Merrill	27,231
Clothes Dryers	J. Johnson	29,599
Clothes Dryers	D. K. Hickok	29,694
Clothes Dryers	R. Gilbert	29,779
Clothes Dryers	H. E. Fickett	29,870
Clothes Dryers	O. P. Allen	29,943
Clothes Dryers	C. Robinson	30,249
Clothes Dryers	E. Dickerman	30,530
Clothes Dryers	J. Johnson	30,551
Clothes Dryers	H. C. Boardman	30,868
Clothes Frames	T. S. Scoville	26,710
Clothes Frames	J. Frazer	28,266
Clothes Frames	C. A. Boynton	28,961
Clothes Frames	W. Hathaway	28,983
Clothes Frames	C. J. Ferguson	29,151
Clothes Frames	A. Greenwood	29,163
Clothes Frames	S. T. Lamb	30,069
Clothes Frames	P. Cady	30,124
Clothes Sprinklers	S. N. Davis	30,565
Clothes Squeezers	F. Arnold	30,451
Clothes Squeezers	G. D. Trumppore	30,596
Clothes Wringers	R. O. Meldrum and A. B. Paxon	26,914
Clothes Wringers	E. Dickerman	27,781
Clothes Wringers	C. W. Higgins and A. S. Willard	28,752
Clothes Wringers	G. J. Colby	30,802
Clothes, Wringing	J. H. Clark	28,156
Clover, Hulling	J. D. Torrey	30,962
Clubs, Police	J. L. Rowe	27,335
Coal, Breakers for	P. Umholtz	27,581
Coal, Distillation of, Apparatus for	H. P. Gengembre	27,542
Coal, Excavating, Machines for	H. Wilverth	26,726
Coal, Machines for Breaking	G. E. Hoyt	27,220
Coal, Machines for Breaking	J. P. Sykens	27,191
Coal, Preparing	H. Mahew, Jr., and E. Mahew	27,373
Coal and Ores, Desulphurizing	W. H. Letterman	28,875
Coal and Ores, Purification of	J. Burroughs	27,689
Coal Screens	H. L. Cake	26,890
Cocks	B. Pickering	29,309
Cocks, Guard or Gas, forming	J. W. Lyon	27,228
Cocks, Oil	J. Hare	27,902
Cocks, Pull	G. Leach	28,588
Cocks, Stop	T. Daniels	27,112
Cocks, Stop	R. Nicolls	28,596
Cocks, Stop	H. A. Chapin	29,744
Cocks, Stop, Finishing plugs of	J. W. Lyon	27,370
Cocks, Stop, Operating	D. N. Dunzack	26,975
Cocks, Valve	R. Nickerson and A. B. Colton	28,192

Invention or Discovery.	Name of Patentee.	Number.
Cocks, Waste, for hydrants.....	G. W. Robertson.....	26,785
Coffee, &c., cleaning, drying, and polishing, Apparatus for.	W. Newell.....	30,083
Coffee Pots.....	W. Chesterman.....	26,889
Coffee Pots.....	G. K. Farrington.....	26,945
Coffee Pots.....	J. Magee.....	27,371
Coffee Pots.....	T. Yates.....	28,803
Coffee Pots.....	J. Denley.....	29,253
Coffee Pots.....	G. Neilson.....	29,302
Coffee Pots.....	J. Beaumont.....	30,559
Coffee Roasters.....	R. Landstrom.....	27,454
Coffee Roasters.....	R. Little.....	29,798
Coffins.....	C. L. Carter and E. Jones.....	28,451
Coffins, Glass.....	G. W. Scollay.....	30,252
Coffins, Glass.....	G. B. Field.....	30,874
Coffins, Wooden.....	F. Brubach.....	30,292
Coin Detectors.....	H. Maranville.....	27,140
Coke, Desulphurizing.....	G. Nock.....	28,543
Collars, Horse.....	J. Bullock.....	26,748
Collars, Horse.....	C. J. Fisher.....	29,154
Collars, Horse, Stuffing.....	W. C. Haberton.....	26,671
Collimators.....	G. N. Fairchild and T. Joyce.....	30,914
Coloring matter from oak bark, Obtaining.....	C. Hinricks.....	29,489
Coloring surface of metals.....	M. Edwards.....	26,978
Colors, Aniline, Preparation of.....	J. Renard.....	29,404
Columns, Double Cylinder Fire-proof.....	J. B. Cornell.....	27,528
Comb Cleaners.....	C. P. S. Wardwell.....	30,949
Combs.....	E. M. Noyes.....	28,008
Compass Protractors.....	F. H. West.....	30,187
Condensation, Apparatus for.....	P. Mihan and M. A. Lane.....	30,078
Condensers.....	A. C. Brown.....	29,054
Condensers of Stills, Construction of.....	P. Mihan.....	28,325
Cooking Utensils.....	B. W. Dunklee.....	27,115
Cooper's Tools.....	J. P. Wood.....	27,955
Copper Vessels, Planishing.....	H. Kay and T. Avery, Jr.....	29,177
Cord Covering, Machines for.....	H. Heineman and J. Buser.....	30,944
Cork Drawers.....	C. Alexander.....	29,539
Cork Screws.....	M. L. Bym.....	27,615
Cork Screws.....	P. Blake.....	27,665
Corn and Cob Crushers.....	A. Glover.....	28,571
Corn Huskers.....	S. Johnston.....	27,638
Corn Huskers.....	N. T. Spear.....	27,841
Corn Huskers.....	D. M. Mefford.....	28,884
Corn, husking and shelling, Machines for.....	J. Wind.....	30,860
Corn Husks, machines for Stemming.....	D. M. Mefford.....	30,239
Corn Shellers.....	S. Fletcher and J. P. Pike.....	26,662
Corn Shellers.....	S. W. Ryckman.....	27,077
Corn Shellers.....	N. Drake.....	27,705
Corn Shellers.....	J. G. Putnam.....	28,440
Corn Shellers.....	E. A. Smead.....	28,612
Corn Shellers.....	J. P. Smith.....	28,784
Corn Shellers.....	T. J. Newland.....	29,188
Corn Shellers.....	G. Danforth.....	29,673
Corn Shellers.....	M. Hausman.....	29,886
Corn Shellers.....	G. W. Hathaway.....	30,403
Corn Shellers and Cleaners.....	J. C. Richards.....	30,185
Corn Shock Binders.....	C. Stowe.....	28,019
Cornstalks, shocking, Machines for.....	S. B. Lawrence.....	29,286
Cornices, forming, of Sheet Metal, Machines for.....	J. Lee.....	28,676
Cotton Bale Fastenings.....	T. McIntire.....	29,185
Cotton Cleaners.....	S. C. Ames.....	29,945
Cotton Cleaners.....	J. Hayden.....	29,971
Cotton Cleaners.....	C. Smith.....	30,003
Cotton Cleaners.....	W. H. Johnson.....	30,227
Cotton Cleaners.....	J. W. Thorn.....	30,435
Cotton Cleaners.....	J. Ryder, W. Carpenter, and H. R. Jolly.....	30,989
Cotton Cleaning.....	J. Gilmore.....	28,361
Cotton Cleaning, Machines for.....	B. Jackman.....	30,880
Cotton Gins.....	B. H. Jenks and W. A. Tuttle.....	26,681
Cotton Gins.....	L. S. Chichester.....	26,815
Cotton Gins.....	W. W. Howell.....	27,290
Cotton Gins.....	A. H. Burdine.....	29,765
Cotton Gins.....	J. Goulding.....	29,780
Cotton Gins.....	H. L. Emery.....	29,867
Cotton Gins.....	N. A. Patterson.....	30,497
Cotton Gins, Feeders for.....	S. Z. Hall.....	29,968
Cotton Goods, Finishing.....	C. S. Davis.....	26,895
Cotton Pickers.....	J. Griffin.....	28,980
Cotton Pickers.....	L. Jennings.....	29,435
Cotton Pickers, Hand.....	W. B. Cragill.....	27,348
Cotton Plants, Machines for Cutting.....	B. F. Carrier.....	27,352
Cotton Scrapers.....	J. M. Cobb.....	28,835
Cotton Scrapers.....	J. C. Teague.....	29,924

Invention or Discovery.	Name of Patentee.	Number.
Cotton Scrapers	C. H. Burbidge	30,718
Cotton Scrapers	J. W. Collins and R. Y. Wilkinson	30,721
Cotton Scrapers	W. L. Milholm	30,746
Cotton Seed, Cleaning	A. J. Hardin	30,573
Cotton Seed, Hulling	J. Tiffany	30,096
Cotton Stalks, Pulling and Cutting	S. Beers	26,828
Cotton, Wire Screen for Cleaning	J. E. Crane	26,887
Couches for Railroad Cars	E. C. Knight	27,297
Couches for Railroad Cars	W. A. Brown	29,137
Coupling Attachments for Cords, Ropes, &c.	J. L. Howard	27,906
Couplings for Belts	C. Fairfax, Jr.	29,684
Couplings, Car	J. Hood	26,990
Couplings, Car	J. Bostwick, Jr., and A. Alden	27,516
Couplings, Car	S. Daggett, Jr.	27,531
Couplings, Car	R. Rawson	27,737
Couplings, Car	J. J. Vaughan	28,444
Couplings, Car	J. S. Sammons	28,609
Couplings, Car	L. and W. H. Waddell	28,620
Couplings, Car	W. W. Culpepper	28,660
Couplings, Car	J. W. Van Houton	29,022
Couplings, Car	J. P. Mendenhall	29,395
Couplings, Car	L. H. Shular	29,526
Couplings, Car	R. S. Potter	29,815
Couplings, Car	A. Oot	30,496
Couplings for City Railroad Cars	G. Collyer and A. H. Patterson	29,142
Couplings for City Railways	G. Collyer and A. H. Patterson	29,954
Couplings, Hose	J. Singer	26,713
Couplings, Hose	L. Button and R. Blake	26,749
Couplings, Hose	S. W. Warren	28,221
Couplings, Hose	G. Hancock	29,548
Couplings, Hose	C. F. Spencer	30,261
Couplings, Hose	B. Holly	30,678
Couplings, Hose Pipe	L. Button and R. Blake	30,909
Couplings, Railroad Car	G. Lavally, Jr.	28,872
Couplings, Railroad Car	L. Thorp and W. D. Shurtleff	29,205
Couplings, Railroad Car	O. Hood, Jr.	29,219
Couplings, Railroad Car	W. H. H. Miller	29,806
Couplings, Railroad Car	J. McKinney	29,900
Couplings for Shafting	S. Hall	28,474
Couplings for Shafting	S. Hall	28,573
Couplings for Shafting	H. L. Haynes	28,860
Couplings, Socket	E. P. Gleason	30,400
Couplings, Thill	R. C. Milling	30,747
Couplings of Thills to Axles	J. McDermott	29,289
Couplings of Thills to Axles	R. Morrison	29,294
Couplings of Thills to Axles	J. Sadler	29,317
Covers for Preserve Cans	C. L. Kelling	26,907
Cows, Stabling	P. Burke	30,294
Cracker Machines	C. Marsh, 2d	29,295
Cracker Machines	J. and J. C. Holyland	30,752
Cradles, Child's	L. K. Selden	27,835
Cradles, Infant's	S. F. Brooks	27,964
Cranes	J. T. Smith	29,109
Cranes, Portable	C. Snyder and S. M. Smith	30,358
Cranks, Machines for overcoming dead points of.	J. P. Cooper	27,698
Creasing Machines	W. S. Bullan	30,785
Creepers to prevent Slipping on the Ice	N. S. Schell	26,961
Crimping Machines	D. Bissell	29,757
Crutches	A. Bicket	26,829
Cupboard and Sink combined	A. Iske	29,493
Culinary Apparatus	I. Forman	30,214
Cultivators	F. Davis	26,656
Cultivators	H. R. Kinney	26,682
Cultivators	F. and P. A. Misner	26,695
Cultivators	I. K. Staman	26,796
Cultivators	A. Carey	27,106
Cultivators	J. O. Harris and W. F. Slewder	27,125
Cultivators	T. Murphy	27,144
Cultivators	J. Vowles	27,174
Cultivators	W. W. Green	27,363
Cultivators	J. B. Netherland	27,376
Cultivators	J. J. Raxson	27,378
Cultivators	T. S. Scoville	27,388
Cultivators	F. O. Wilson	27,402
Cultivators	R. Craig	27,406
Cultivators	J. Guyer	27,445
Cultivators	E. Julier	27,450
Cultivators	W. Bushnell	27,614
Cultivators	C. M. and D. E. Hall	27,627
Cultivators	S. Hoake	27,632
Cultivators	G. Smith	27,654
Cultivators	W. D. Dorsey	27,703
Cultivators	J. G. Christopher	27,776

Invention or Discovery.	Name of Patentee.	Number.
Cultivators	J. F. Eylar	27,975
Cultivators	T. R. Smith	28,016
Cultivators	J. Neff, Jr.	28,191
Cultivators	R. P. Van Horne	28,523
Cultivators	V. Harwell	28,576
Cultivators	R. M. Brooks	28,829
Cultivators	J. F. Cameron	28,831
Cultivators	J. Charlton	28,833
Cultivators	O. F. Fitch	28,842
Cultivators	T. and R. Kinghorn	28,870
Cultivators	J. M. Williams	28,929
Cultivators	C. Clark	28,968
Cultivators	A. Agnew and W. Morrison	29,043
Cultivators	J. B. Livezy	29,087
Cultivators	H. Ogborn	29,094
Cultivators	E. Briggs	29,136
Cultivators	E. Emmert	29,368
Cultivators	Z. W. and E. D. Lee	29,389
Cultivators	W. C. Lostutter and S. Wolcott	29,391
Cultivators	S. Goldsmith	29,583
Cultivators	L. E. Hawkins	29,592
Cultivators	M. Rigell	29,618
Cultivators	J. Shannon	29,626
Cultivators	W. A. Taylor and W. W. Graves	29,637
Cultivators	F. Wolf	29,644
Cultivators	L. Leber	29,704
Cultivators	T. W. McDill	29,707
Cultivators	T. Black	29,758
Cultivators	G. W. Brown	29,762
Cultivators	E. S. Huff	29,789
Cultivators	E. Wells	29,836
Cultivators	G. W. N. Yost	29,849
Cultivators	J. R. Gilbert and S. R. Weston	29,876
Cultivators	G. W. N. Yost	29,934
Cultivators	W. H. and L. Seymour	30,000
Cultivators	T. E. C. Brinley	30,149
Cultivators	J. F. Wood	30,173
Cultivators	N. C. Carter	30,295
Cultivators	C. Debolt	30,302
Cultivators	W. May	30,447
Cultivators	H. H. Robertson and C. G. Carr	30,589
Cultivators	J. H. and E. H. Anderson	30,709
Cultivators	L. B. Benton	30,711
Cultivators	C. A. Clark	30,720
Cultivators	H. J. Lake	30,737
Cultivators	W. J. McCoy	30,744
Cultivators	N. Messenger	30,745
Cultivators	M. H. Moore and A. Satherwhite	30,748
Cultivators	J. Neidrich and E. R. Girvin	30,751
Cultivators	H. C. Ravenscraft	30,758
Cultivators	L. Stevens	30,771
Cultivators	H. M. Belden	30,796
Cultivators	B. Finkham	30,897
Cultivators	I. Miers	30,926
Cultivators	J. B. Geisinger and D. H. S. Williams	30,963
Cultivators	J. and St. Clair Gum	30,966
Cultivators, Corn	W. W. Golsan	29,877
Cultivators, Corn and Cotton	G. T. Bennett	27,962
Cultivators, Cotton	T. Newcomb and G. W. Byrd	26,699
Cultivators, Cotton	C. Casey	27,616
Cultivators, Cotton	M. Snow	27,659
Cultivators, Cotton	W. F. Johnson	28,583
Cultivators, Cotton	R. J. Gatling	28,978
Cultivators, Cotton	J. Hinman and D. S. French	29,127
Cultivators, Cotton	T. H. Dodge	29,147
Cultivators, Cotton	J. A. Hartsfield	29,166
Cultivators, Cotton	M. Rigill and W. D. Ivey	29,196
Cultivators, Cotton	G. W. N. Yost	29,211
Cultivators, Cotton	J. Speer	29,413
Cultivators, Cotton	J. L. Middlebrooks	29,507
Cultivators, Cotton	J. C. Sellers	30,163
Cultivators, Cotton	N. Rogers	30,763
Cultivators, Cotton	H. G. Street	30,773
Cultivators, Cotton	N. A. H. Goddin	30,810
Cultivators, Hand	P. S. Clinger	27,694
Cultivators, Hand	D. C. Jordon	28,376
Cultivators, Seeding	T. A. Galt	30,876
Cup, Drinking, Telescopic	P. H. Niles	28,597
Cup, Shaving	T. E. Hughes	28,085
Cup and Stand, Metallic	S. J. Ludd	28,238
Curtains, Window	G. L. Kelty	28,585
Curtains, Window	G. Butterfield and D. Bowker	30,385
Curtain Fixtures	A. C. Babcock	26,824

Invention or Discovery.	Name of Patentee.	Number.
Curtain Fixtures.....	W. Price.....	26,925
Curtain Fixtures.....	C. Fisher.....	25,980
Curtain Fixtures.....	G. L. Kelty and T. G. Harrold.....	27,410
Curtain Fixtures.....	E. Brown.....	27,686
Curtain Fixtures.....	J. Smith.....	27,747
Curtain Fixtures.....	J. F. Hall.....	28,363
Curtain Fixtures.....	W. Cleveland.....	29,242
Curtain Fixtures.....	J. F. Hall.....	29,935
Curtain Fixtures.....	J. G. Whitwell.....	30,172
Curtain Fixtures.....	T. G. Harrold and G. L. Kelty.....	30,878
Curtain Fixtures, Window.....	A. W. Tanner and O. G. Gorton.....	27,749
Curtain Fixtures, Window.....	N. H. McLean.....	30,236
Curtain Slides, Window.....	G. Trinks.....	28,922
Cushions for Billiard Tables.....	H. W. Collender.....	30,177
Cushions, Hat.....	A. D. Purinton.....	28,902
Cushions for horses feet.....	L. Hale.....	28,473
Cutlery, Table.....	J. W. Gardner.....	27,357
Cut-off, Variable, for Steam Engines.....	D. Fellenbaum.....	28,632
Cutters, Bolt.....	J. K. Taylor.....	30,895
Cutters, Bung.....	J. Tiebout.....	28,640
Cutters, Cabbage.....	J. C. Wilkins.....	26,725
Cutters, Cheese.....	J. G. Barker.....	29,559
Cutters, Corn Stalk.....	J. R. Marshall.....	29,705
Cutters, Cotton and Corn Stalk.....	G. S. Rondebush.....	30,645
Cutters, Feed.....	G. W. Hathaway.....	30,817
Cutters, Fodder.....	A. R. Reese.....	30,697
Cutters, Fruit and Vegetable.....	W. H. Trissler.....	28,419
Cutters, Gas Pipe.....	W. Kenyon.....	29,602
Cutters, Glass.....	J. Collman and H. Fenders.....	30,722
Cutters, Glass.....	M. Kleeman.....	30,973
Cutters, Harvester.....	B. T. Roney.....	29,999
Cutters, Hay and Straw.....	S. S. Clark.....	26,835
Cutters, Hay and Straw.....	D. H. Whittemore.....	29,930
Cutters, Hay and Straw.....	J. D. Felthausen.....	30,056
Cutters, Hay and Straw.....	H. R. Hawkins.....	30,677
Cutters, Hay and Straw.....	J. N. Neff.....	30,750
Cutters, Ice, Shavers, &c., revolving.....	W. H. Hope.....	26,991
Cutters, Meat.....	O. D. Woodruff.....	26,806
Cutters, Meat.....	R. Miles.....	28,393
Cutters, Meat.....	L. Bonnet.....	29,239
Cutters, Meat.....	J. G. Perry.....	29,400
Cutters, Meat.....	J. G. Perry.....	30,088
Cutters, Meat, casting cylinders for.....	S. R. Plumb.....	29,440
Cutters, Mowing Machine.....	F. Russell.....	27,159
Cutters, Paper Bag.....	L. D. Barrand.....	27,959
Cutters and Parers, Peach.....	H. St. J. Hillsman.....	30,820
Cutters, Stalk and Root.....	F. Fidler.....	29,775
Cutters, Straw.....	N. Holmes.....	26,676
Cutters, Straw.....	I. W. McGaffey.....	27,003
Cutters, Straw.....	D. J. Powers.....	27,154
Cutters, Straw.....	D. Utley, 2d, and P. Teed.....	27,487
Cutters, Straw.....	C. B. Mallory.....	27,727
Cutters, Straw.....	H. S. Root and T. Lloyd.....	27,931
Cutters, Straw.....	N. Edwards and E. J. Day.....	28,068
Cutters, Straw.....	S. Ring.....	29,311
Cutters, Straw.....	D. B. Caldwell.....	29,463
Cutters, Straw.....	E. D. Lady.....	29,797
Cutters, Straw.....	W. B. Kern.....	30,067
Cutters, Straw.....	J. H. Lilly.....	30,414
Cutters, Straw.....	I. A. and G. W. Cowdry.....	30,529
Cutters, Straw.....	J. Sciefferlin.....	30,695
Cutters, Straw and Stalk.....	O. W. Preston, Jr., and W. W. Farnham.....	29,442
Cutters, Sugar.....	C. Kinzler and W. Rosebuck.....	27,135
Cutters, Tobacco.....	W. H. Pease.....	30,929
Cutters, Vegetable.....	F. Schutte.....	26,711
Cutters, Vegetable.....	J. W. Stickler.....	26,714
Cutting Fat, Machines for.....	J. M. Hunter.....	28,179
Cutting Hay, &c., Machines for.....	T. H. and D. T. Willson.....	30,597
Cutting Straw, &c., Machines for.....	W. Gale.....	30,001
Cylinders, Casting, for threshing machines.....	L. and C. Whitman.....	29,738
Cylinders, Spinning Frame.....	R. Plews.....	30,931
Cylinders, Turning, Machines for.....	G. Sibley.....	29,014
D.		
Dating Machines.....	G. J. Hill.....	28,861
Decolorizers, Compounds used as.....	P. M. Belton.....	29,560
Delineating the course of Rivers, Machines for.....	H. Collier.....	30,528
Dentists' Crystalline Gold, Manufacture of.....	A. J. Watts.....	30,847
Desks, Reading and Writing.....	C. Pretsch.....	27,831
Desks, School.....	A. Chase.....	30,020
Desks, School.....	S. L. Wilkinson.....	30,102
Desks, Writing.....	E. Hughes.....	28,086

Invention or Discovery.	Name of Patentee.	Number.
Die Plate for cutting saws.....	E. P. Gleason.....	28,747
Die Stock	J. Teachout	27,657
Digging Machine.....	A. A. Garver	28,359
Distilling Apparatus.....	J. Sloan.....	26,877
Distilling and boiling, Apparatus for	W. Hoffmire	29,376
Distilling, Apparatus for.....	F. W. Willard.....	27,503
Ditching Machines	F. B. Scott	26,934
Ditching Machines	A. Woodfolk	27,404
Ditching Machines	J. W. Barcroft.....	27,419
Ditching Machines	I. A. Benedict and G. W. Cummings	28,247
Ditching Machines	C. O. West and others	28,320
Ditching Machines	J. Masters.....	28,387
Ditching Machines	P. W. Adair.....	28,544
Ditching Machines	A. S. Ballard	29,649
Ditching Machines, Mole	I. Hodgson	29,269
Dividers, Spring	J. W. Strange	30,009
Docks, Dry, Marine.....	H. I. Crandall.....	28,658
Docks, Wharves, &c., Fenders for	J. Moonrey.....	28,765
Doors and Gates, closing	S. Stewart	30,005
Doors, Glass Plate	D. Montague and J. Townsend	28,396
Doors, holding open.....	A. de Witzleben.....	29,770
Doors, Show Case	D. Barclay	27,957
Door Catches.....	J. Walton	30,016
Door Fasteners	J. Lightfoot.....	28,186
Door Numbers, casting.....	J. F. Fuller.....	27,860
Door Plates, Index.....	N. Ames	29,430
Dough, raising and kneading, Machines for	G. Scott.....	30,764
Dove-tailing Machines.....	T. H. Burley	26,647
Dove-tailing Machines.....	H. W. Jeleff.....	28,672
Dove-tailing Machines.....	J. Bain and S. C. Brown.....	30,382
Dove-tailing Machines, operating the cutters in	J. Bell	29,051
Drains, Cement, construction of.....	B. Livermore.....	28,091
Drains, underground, lining with Cement	A. Watson	27,324
Draining and Pipe-laying Machines.....	I. C. Pratt.....	26,708
Dredges, Oyster	W. L. Force	27,213
Dredging Apparatus.....	T. A. Bryan.....	28,963
Dress-Lifters	W. E. Stein.....	27,578
Drills	G. C. Taft.....	27,320
Drills, Chuck.....	J. Fox	27,044
Drills, Frames for.....	G. C. Taft.....	30,774
Drills, Hand	J. H. Parker.....	28,327
Drills, Hand	J. H. Parker.....	28,328
Drills, Racket.....	L. R. Billard	29,353
Drills, Rest	C. Teachout.....	28,791
Drills, Rock	E. L. Foote.....	28,569
Drills, Rock	L. E. Cushman and J. S. French.....	28,971
Drills, Rock	D. Ralston	29,716
Drills, Seed	J. Smith.....	27,162
Drills, Seed	J. Selby	27,390
Drills, Seed	G. S. Ball and W. H. Nauman.....	30,114
Drills, Seed	H. Moore.....	30,685
Drills, Seed	A. Smith	30,768
Drilling Machines, Rock	F. Schawlm.....	29,011
Drilling Machines, Rock	L. M. Gilmore.....	30,023
Drying Chambers	J. E. Thourne	30,436
Dulcimers	J. Low.....	28,811
Dumb Waiters.....	A. Murtaugh.....	30,831
Dusters, Bran	J. W. Houghtelin.....	20,863
Dynamometers ..	A. Warren and E. Damon, Jr.....	28,925
E.		
Egg Beaters	S. Walker.....	25,958
Egg Beaters	J. M. Jay.....	27,054
Egg Beaters	J. M. Jay and J. Danner	27,908
Egg Beaters	F. Ashley	28,047
Egg Beaters	J. P. McLean and P. A. Morley	28,760
Egg Beaters	H. F. Drott.....	30,053
Egg Beaters	W. T. Nicholson and T. Earle.....	30,152
Egg Beaters	U. Baker.....	30,453
Egg Cups, Spring	H. G. Batty.....	27,095
Electricity, Atmospheric, Method of utilizing.....	H. C. Vion	28,793
Electro-magnetic Apparatus.....	A. N. Baker.....	29,850
Electro-magnetic Apparatus.....	J. Kidder.....	30,068
Electro-Magnets	C. T. Chester.....	29,862
Electro-Plating with alloys of Gold.....	A. Berthoud.....	30,663
Elevators and Conveyors, Water.	J. F. Keller	30,881
Elevators, Grain	T. H. Green	29,881
Elevators for hay, &c	F. F. Fowler	27,899
Elevators for storehouses.....	W. H. Allen.....	29,751
Ellipsograph	R. E. Harte.....	30,816
Engines, Air.....	O. M. Stillman	28,910
Engines, Air.....	O. M. Stillman	28,911

Invention or Discovery.	Name of Patentee.	Number.
Engines, Air.....	J. Ericson.....	30,306
Engines, Air.....	S. Wilcox, Jr.....	30,700
Engines, Air.....	S. Wilcox, Jr.....	30,701
Engines, Caloric.....	A. A. Henderson.....	30,315
Engines, Carding.....	J. Fitton.....	30,875
Engines, Compressed Air.....	W. C. Turnbull.....	27,938
Engines, Compressed Air.....	D. Dickford.....	28,248
Engines, Electro-magnetic.....	M. Vergnes.....	30,272
Engines, Hot Air.....	B. F. Craig.....	26,837
Engines, Hot Air.....	S. Wilcox, Jr.....	27,180
Engines, Hot Air.....	W. D. Grimshaw.....	28,748
Engines, Hydraulic.....	J. F. Burgen and A. Kock.....	27,104
Engines, Hydraulic.....	E. Thomas and W. K. Hall.....	30,844
Engines, Locomotive.....	A. J. Graham.....	29,879
Engines, Locomotive and Car combining.....	M. McDowell and N. W. Wheeler.....	27,002
Engines, Locomotive, discharging smoke, cinders, &c., from.	J. Greacen, Jr.....	29,880
Engines, Locomotive, Feed Water Apparatus for.....	R. A. Wilder.....	27,662
Engines, Locomotive, Running Gear for.....	J. L. Whetstone.....	27,850
Engines, Locomotive, superheating steam for.....	J. Martin.....	30,859
Engines, Locomotive, supplying with water.....	A. D. Merritt and C. Kemplen.....	30,829
Engines, Locomotive, Water Heater for.....	S. F. Allen.....	29,452
Engines, Paper Rag.....	J. Storm.....	27,167
Engines, Rotary.....	A. T. Reeder.....	28,305
Engines, Rotary.....	T. H. Witherby.....	28,624
Engines, Rotary.....	J. Rix and J. S. Shaw.....	28,905
Engines, Rotary.....	S. T. Russell.....	29,408
Engines, Rotary.....	C. Donovan.....	29,473
Engines, Rotary.....	H. C. Emery.....	29,475
Engines, Rotary.....	B. A. Goodell.....	29,584
Engines, Rotary.....	P. B. Holmes.....	29,787
Engines, Rotary.....	W. Humphreys.....	30,224
Engines, Rotary.....	K. and T. Cox.....	30,389
Engines, Rotary.....	F. Kettler.....	30,481
Engines, Rotary.....	J. J. Slocum.....	30,933
Engines to obtain motive power from steam, æri-form, or gaseous fluids under pressure.	J. W. Durham.....	29,149
Engines, Oscillating.....	C. R. Otis.....	30,240
Engines, Oscillating.....	E. G. Otis.....	30,241
Engraving copper cylinders, Machines for.....	B. L. Phillips.....	29,002
Engraving rollers, &c., Machines for.....	W. Shields.....	28,332
Envelopes.....	B. Morison.....	28,767
Envelopes.....	J. B. Murray.....	30,980
Envelopes, Prepaid.....	J. B. Murray.....	30,151
Envelopes, Ruled.....	A. de Witzleben.....	30,469
Embalming Dead Bodies.....	W. Iddings.....	30,576
Emery Cloth, Substitutes for.....	T. J. Mayall.....	27,817
Escapements, Chronometers'.....	T. Morrison.....	28,719
Escapements, Lever, for watches.....	J. Devlin.....	29,575
Evaporating Apparatus.....	J. Sutton.....	26,717
Evaporating Apparatus.....	I. Sherman.....	28,415
Evaporating Apparatus, construction of.....	T. J. Price.....	28,304
Evaporators, Rotary, construction of.....	A. H. Miller.....	28,002
Evaporators for sugar pans.....	J. Larkin.....	26,851
Excavating and grading Machines.....	P. T. Mayne.....	29,183
Excavating Machines.....	G. S. Manning.....	29,182
Excavating Machines.....	M. B. True.....	30,098
Excavators.....	A. J. Bartlett.....	30,610
Excavators.....	J. P. Hayes.....	30,819
Excavators, Channel.....	R. Gamble, Jr.....	30,626
Excavators, Dirt Loading Apparatus for.....	W. Cooper.....	27,699
Exhaust of Steam Engines, regulating.....	J. Thierry.....	28,918
Exhaust, Variable, for Locomotive Engines.....	J. Dykerman.....	28,976
Exhausting Atmospheric Air or Gases, Apparatus for.....	R. W. Sievier.....	29,226
Eyelet Machines.....	H. D. Walcott.....	27,674
Eyelet Machines.....	W. Steinmetz.....	27,934
F.		
Fabrics, Piled, Manufacturing.....	C. Miller.....	27,671
Fabrics, Piled, manufacture of.....	N. Hill.....	28,484
Fabrics for roofing, belting, &c.....	J. B. Wands.....	29,423
Fabrics, Water-proof.....	L. Simonet.....	30,593
Fan, Automatic mosquito.....	C. A. Gale.....	27,862
Fan or Brush, Fly.....	M. Laveen.....	27,814
Fans, Grain.....	G. Goewey.....	26,760
Fans, Grain.....	P. Bailey.....	27,417
Fan and Parasol.....	J. T. Eichberg.....	30,213
Fan Blowers.....	H. B. Adams.....	26,962
Fan Blowers.....	J. B. Charles.....	27,108
Fats, cutting, Machine for.....	W. E. Boulger.....	28,960
Fats, decomposing into fatty acids, Method of.....	R. A. Tilghman.....	28,315
Fatty Matter, obtaining from residuums.....	D. Thain and W. Jackson.....	26,799

Invention or Discovery.	Name of Patentee.	Number.
Fats, rendering	P. Tompert and J. Coyle	29,018
Faucets	A. S. Hart	28,844
Faucets	I. C. Tate	28,699
Faucets	D. H. Thorp	28,819
Faucets	J. Flattery	29,263
Faucets	J. Farnan	30,055
Faucets	L. L. Alrich	30,110
Faucets	W. Cleveland	30,122
Faucets for Bottles	J. Hiney	30,920
Faucets, Measuring	M. W. Nalton	27,465
Faucets, Measuring	G. K. Babcock	27,679
Faucets, Measuring	G. Hubbard	30,321
Feathers, Renovating ..	O. J. Pennell	28,500
Felloes, Bending, Machines for	S. Moyer	27,560
Felloes, Bending, Machines for	A. Hemenway	28,080
Felloes, Machines for	F. W. Mallett	29,223
Felt Sheathing, Manufacture of	J. B. Hyde	28,489
Felting Machinery	I. H. Bloodgood and M. A. Johnson	27,345
Fences	S. Denten	27,209
Fences	H. Burrows	30,021
Fences	N. M. Stratton	30,507
Fences	J. M. Pitts	30,544
Fences	O. H. Woodworth	30,780
Fences, Flood	D. C. Wilkinson	30,599
Fences, Picket, Machine for making	J. Moore and A. Kelly	27,923
Fences, Portable	W. M. Wallace	29,024
Fertilizers	L. Harper	26,985
Fertilizers	A. Rolland	27,072
Fertilizers	L. Stephens	28,516
Fertilizers, Sowing	W. D. Mason	27,729
Fertilizers, Sowing	R. J. Hill	28,173
Fertilizers, Sowing, Machines for	B. Picquet	30,887
Ferules	T. W. Detray	28,458
Flasks for casting iron columns	H. Demmick	29,745
Flasks for casting packing around cannon balls	L. Evans	30,533
Flasks, Powder	G. W. Whipple	28,134
Floats, Shoemaker's	F. L. Langley	28,285
Flock, Cutting, Machines for	J. Tilton and E. Ritson	28,316
Flour Bolts, Screens for	D. Landis	30,483
Flour Packing	L. A. Clapp	28,561
Flour, Preparation of	T. Byrne	29,859
Flour Separators	S. Hughes	27,907
Flower Pots	J. Hively	26,849
Flower Stands	H. J. Coster	29,145
Flues, Construction of	R. F. O'Brien	28,295
Fluting Apparatus	G. B. Arnold, A. H. Price, and A. S. Urner	29,337
Fibrous materials, Manufacturing Sheets of	W. Fuzzard	30,058
Fibrous materials, Reducing long staple	S. M. Allen	27,878
Fibrous materials, Surfacing	W. Fuzzard	28,745
Figures, &c., Machines for copying	F. C. Meyer	28,040
Files	P. Cinquini	27,691
Files, Cutting, Machines for	T. Burr	27,591
Files, Cutting, Machines for	J. C. Cooke	29,130
Files, Cutting, Machines for	E. Bernott	29,236
Files, Cutting, Machines for	W. Van Anden	29,641
Files, Manufacture of	M. D. Whipple	28,947
Files, &c., Sharpening, method of	W. B. Gillett	27,046
Filtering Apparatus	J. H. G. D. Wagner	28,524
Filters	C. F. Baxter	26,965
Filters	L. S. Chichester	28,533
Filters	T. C. Simonton	28,942
Filters	J. Fitch	29,069
Filters	T. C. Clarke	30,300
Filters	M. W. Warne	30,366
Fingers, Guard, for Harvesters	R. Beans	27,515
Fingers, Guard, for Harvesters	G. W. Slough	28,206
Fire Arms	J. Lord	28,677
Fire Arms	C. F. Brown	30,045
Fire Arms, Breech-loading	T. P. Gould	26,734
Fire Arms, Breech-loading	J. M. Wampler	27,399
Fire Arms, Breech-loading	N. L. Babcock	27,509
Fire Arms, Breech-loading	C. E. Snider	27,600
Fire Arms, Breech-loading	J. Letort and H. S. Mathews	27,723
Fire Arms, Breech-loading	C. Cox	27,778
Fire Arms, Breech-loading	G. P. Foster	27,874
Fire Arms, Breech-loading	M. J. Gallagher	29,157
Fire Arms, Breech-loading	R. F. Cook	29,340
Fire Arms, Breech-loading	E. Allen	30,033
Fire Arms, Breech-loading	F. Jones	30,228
Fire Arms, Breech-loading	C. O. Wood	30,372
Fire Arms, Breech-loading	E. Maynard	30,537
Fire Arms, Breech-loading	J. Boynton	30,714
Fire Arms, Breech-loading, and magazine	J. S. Reeder	30,760

Invention or Discovery.	Name of Patentee.	Number.
Fire Arms, Constructing	E. Allen.....	27,415
Fire Arms, Magazine	P. Boynton.....	26,646
Fire Arms, Magazine	B. T. Henry.....	30,446
Fire Arms, Repeating	W. H. Morris and C. L. Brown	26,919
Fire Arms, Repeating	W. H. Elliot	28,460
Fire Arms, Revolvers	J. Adams.....	30,602
Fire Arms, Revolving	W. H. Bell.....	27,518
Fire Arms, Revolving	J. M. Cooper	27,526
Fire Arms, Revolving	F. D. Newbury.....	27,868
Fire Arms, Revolving	E. Savage and H. S. North.....	28,331
Fire Arms, Revolving	A. J. Gibson.....	28,437
Fire Arms, Revolving	W. H. Elliot.....	28,461
Fire Arms, Revolving	E. Allen	28,951
Fire Arms, Revolving	A. J. Gibson.....	29,126
Fire Arms, Revolving	C. R. Alsop	29,213
Fire Arms, Revolving	J. M. Cooper	29,864
Fire Arms, Revolving	D. Moore	30,079
Fire Arms, Revolving	E. A. Prescott	30,245
Fire Arms, Revolving	A. Spellier	30,260
Fire Arms, Revolving	A. J. Gibson.....	30,309
Fire Arms, Revolving	F. D. Newbury	30,494
Fire Arms, Revolving, Revolving blocks for	C. Sharps	30,765
Fire Arms, Revolving, Rammer for.....	C. R. Alsop	29,538
Fire Arms, Rifled	J. B. Atwater.....	27,342
Fire Arms, Self-loading	J. D. Moore	27,374
Fire Arms, Self-loading	C. M. Spencer.....	27,393
Fire Arms, Self-loading	N. W. Brewer.....	28,646
Fire, Apparatus for protecting buildings from.....	S. M. Andrews.....	29,044
Fire, Composition for extinguishing.....	C. G. Mueller	27,375
Fire Escapes	G. Heydrich	27,127
Fire Escapes	J. Deckelman and T. Spiess.....	27,972
Fire Escapes	A. Lipperman	27,992
Fire Escapes	F. Seymour	28,095
Fire Escapes	H. O'Baker and J. McGill.....	28,340
Fire Escapes	L. King	28,378
Fire Escapes	L. Knocke	28,380
Fire Escapes	H. Powelson.....	28,501
Fire Escapes	A. Warth.....	28,525
Fire Escapes	W. B. Avery.....	28,551
Fire Escapes	C. W. Crosley	28,740
Fire Escapes	J. J. Holwell	28,862
Fire Escapes	W. McCord	28,880
Fire Escapes	J. W. Patten and G. P. Terry	28,898
Fire Escapes	O. F. Burton.....	29,542
Fire Escapes	I. Grafins.....	30,219
Fire Escapes	W. Brotenstein	30,291
Fire Escapes	J. Hobbs.....	30,318
Fire Escapes	E. B. Larchar.....	30,633
Fire Escapes	H. Morohan	30,639
Fire Escapes	C. Sturel	30,939
Fire Escape Attachment of Horse Stalls	D. S. Neal.....	29,301
Fireplaces.....	J. K. Ross.....	27,741
Fireplaces.....	T. F. Card	27,886
Fireplaces.....	A. Carson	28,347
Fireplaces.....	C. A. Littlefield.....	29,980
Fireplace and Chimney.....	D. Hemingway	29,168
Fireplace Heaters.....	D. S. Quimby	30,349
Fire Pokers	G. R. Moore	29,298
Fire Plugs, Casting	W. M. Ellis.....	27,896
Fishing Reels.....	M. S. Palmer	27,315
Fluids, Elastic, Apparatus for expanding and compressing.	J. Jamison.....	30,924
Fodder, Machines for cutting.....	P. S. Clinger	29,572
Folders, Tuck and Plait.....	R. Brady	29,856
Food, Preserving	W. A. Keeler.....	29,383
Fork and Spoon, Culinary.....	A. Hills.....	27,802
Forks, Hay, Elevating	L. A. Beardsley.....	29,948
Foot Cleaners	R. Shaler and C. B. Rogers.....	29,443
Forging Machines	W. T. Leach	27,550
Frames for Ladies' Dresses	J. R. Palmenberg.....	26,781
Freezers, Cream	E. P. Torrey.....	26,867
Freezers, Ice Cream.....	G. W. Davis.....	28,354
Freezers, Ice Cream.....	C. W. Parker.....	28,402
Freezers, Ice Cream.....	G. W. Brown.....	28,449
Freezers, Ice Cream.....	J. S. Silva.....	30,256
Fruit Cases	C. Doolittle and A. Carson.....	30,303
Fruit Dryers.....	H. Beamer	30,285
Fruit Drying Apparatus.....	J. Randall, 2d.....	28,775
Fruit Drying Apparatus.....	A. C. Lewis	29,390
Fruit Drying Attachment to Cooking Stoves	D. C. Colby.....	30,105
Fruit Gatherers.....	D. P. Chamberlain	26,651
Fruit Jars, Covers for.....	T. B. and J. S. Atterbury	30,662
Fruits, Stoning Machines for.....	R. McCormick.....	28,881

Invention or Discovery.	Name of Patentee.	Number.
Fuel, Solidified from Coal Dust	E. D. Williams	27,401
Furnaces	R. B. Pullam	26,920
Furnaces	B. D. Evans	27,541
Furnaces	P. Low	27,724
Furnaces	R. R. Taylor	28,214
Furnaces	C. F. Baxter	28,730
Furnaces	D. T. Woodrow	29,840
Furnaces	W. D. Thomas	29,925
Furnaces	M. Battel	30,040
Furnaces	D. G. Littlefield	30,333
Furnaces	C. F. Corry	30,724
Furnaces, Air Heating	R. T. Crane	27,530
Furnaces, Bagasse	C. Neames	27,146
Furnaces, Bagasse	C. A. Desobry	28,741
Furnaces, Bagasse	J. M. Jones and J. M. Charpantier	30,107
Furnaces, Bagasse	J. M. Jones and J. Charpentier	30,477
Furnaces for burning Bagasse	S. H. Gilman	26,759
Furnaces for burning Coal Oil or other Hydro-carbon Fluids, under Steam Generators.	T. Shaw	28,539
Furnaces for combustion of Coal Oil and similar Hydro-carbon Fluids.	I. Calkins, P. A. Hoover, and C. W. Gran- nis.	28,154
Furnaces and Cooking Ranges	J. Brown and L. Bridges	30,203
Furnaces for evaporating Sugar Juices	E. Duchamp	26,974
Furnaces, Feeding Sawdust to	J. P. Wigal	28,226
Furnaces, Feeding Sawdust to	S. Kennedy	29,794
Furnaces, Glass	J. B. Hay	29,342
Furnaces for Heating Buildings	W. H. Churchman	29,571
Furnaces, Hot Air	S. Wethered	26,724
Furnaces, Hot Air	J. Stuber	28,112
Furnaces, Hot Air	A. Ernest and C. Shepard	29,150
Furnaces, Hot Air	A. H. Bartlett	30,039
Furnaces, Hot Air	J. Leeds	30,738
Furnaces, Hot Air	O. Paddock	30,752
Furnaces for Plating Iron	C. Wray	27,254
Furnaces, Portable	J. B. Marvin	27,552
Furnaces for Railroad Cars	H. M. Hutchinson	27,449
Furnaces for Steam Boilers	H. Wilkins	30,275
Furnaces of Steam Boilers	R. Gill and G. W. Grier	27,442
Furnaces, Warm Air	F. P. Heller and E. Young	29,167
Furniture Drawers, Supporting	H. R. Taylor	27,247
Furniture, Folding	A. Tracy	28,921
G.		
Gag Runners	W. Robotham	27,158
Galvanic Plates for medical use	J. Hill	30,317
Galvanoplastic Coating for interior of Tubes, Metallic.	J. Matthews, Jr.	28,547
Garments, Fastening	C. W. Baldwin	29,031
Garters	J. P. Fuller	28,841
Gasaliers	J. W. Kerr	28,377
Gas, Apparatus for burning	R. W. Hoit	30,319
Gas, Apparatus for generating	S. Chamberlain	27,775
Gas, Boiling or Roasting by, Apparatus for	W. F. Shaw	28,781
Gas, Compressing	W. H. Gwynne	29,481
Gas from Wood, Making	A. Schmidt	29,941
Gas, Generating	A. Schwaniuger	29,318
Gas, Generating	A. K. Tupper	28,421
Gas, Hydro-carbon, Manufacture of	J. A. Bassett	26,644
Gas, Hydro-carbon, Manufacture of	J. Calkins	26,649
Gas, Illuminating, Manufacture of	L. Short	28,720
Gas, Lighting, by frictional Electricity	W. W. Batchelder	26,964
Gas, Manufacture of	S. T. McDougal	27,460
Gas, Sulphurous Acid, Apparatus for supplying	J. Communy	30,870
Gases, Naphthalizing, Apparatus for	E. H. Ashcroft	28,549
Gas Fittings, Finishing, Machines for	J. W. Lyon	30,536
Gas Generators	C. N. Tyler	29,328
Gas Holders, Portable	O. L. Lawson	28,873
Gas Lighting Instruments	A. Demairin and G. C. Bowers	27,971
Gas Lights, mode of extinguishing	H. K. Symmes	27,170
Gas Meters, Fluid Liquids for	J. Taylor	28,617
Gas Regulators	E. T. Orne	27,649
Gas Regulators	S. H. Whitaker	28,722
Gas Regulators	T. & C. Champion	29,246
Gas Regulators	J. Foster	30,399
Gas Regulators	J. G. Leffingwell	30,415
Gas Regulators for Railroad Cars	A. H. Phillipi	29,401
Gas Torches	G. C. Brower	28,556
Gates	J. Johnson	27,367
Gates	S. H. Sill	28,205
Gates	G. E. Baker	29,234
Gates	H. A. House	29,696
Gates	W. McAfee	29,706
Gates	D. E. Fenn	29,774

Invention or Discovery.	Name of Patentee.	Number.
Gates	C. B. Hurxthal and J. Lee.....	30,223
Gates	J. H. H. Bennett.....	30,460
Gates for Canals Locks	S. J. Seeley	28,201
Gates of Canal Locks, operating	K. T. Hurlburt and H. Thompson	30,323
Gates, Device for opening and closing.....	J. H. Nevin	27,304
Gates, Farm.....	G. C. Bovey.....	30,784
Gates, Flood, self-acting	G. B. Markham.....	29,896
Gates for directing flow of Water upon Tide Wheels...	J. G. Ross.....	31,591
Gates, Molasses.....	G. W. Hubbard.....	26,769
Gates for Molasses, casting	M. R. Chase.....	27,969
Gates, Railroad.....	R. W. Jenks, Jr	27,055
Gates, Railroad.....	O. Sherwood, Jr.....	27,575
Gates, Railroad.....	J. E. McNair and J. E. Elliott.....	29,186
Gates, Railroad.....	L. Butler.....	29,214
Gates, Self-acting Waste, for Mill Dams.,.....	S. Hudson.....	29,887
Gates of Water Wheels.....	A. Morehouse	26,696
Gate and Door Swings	F. W. Kroeber.....	30,327
Gauges, Alarm, for Steam Boilers	E. A. Kimball.....	28,810
Gauges, Alarm, for Steam Engines.....	C. T. Pangborn.....	29,308
Gauges, Circular Saw.....	L. Wright	30,998
Gauges, Clapboarding.....	H. D. Vandercook.....	29,206
Gauges for Double Seaming Machines.....	G. R. Moore.....	29,808
Gauges for filling Barrels.....	W. H. Noyes.....	28,637
Gauges, Magnetic, for Steam Boilers.....	F. A. Hoyt	27,498
Gauges, Marking, for Sewing Machines.....	C. W. Wheeler.....	27,179
Gauges, Method of testing hollow spheres for Water and other purposes.	G. W. Lane.....	27,455
Gauges, Pressure	H. W. Farley	26,900
Gauges, Pressure	C. M. Daboll	30,803
Gauges, Pressure, for Steam Boilers	E. H. Ashcroft.....	27,341
Gauges, Steam	C. W. Kimball	25,850
Gauges, Steam	E. G. Allen.....	26,871
Gauges, Steam	E. G. Allen.....	28,045
Gauges, Steam	A. J. Allen.....	29,646
Gauges, Steam	G. W. Grader and A. C. Wurzbach.....	30,312
Gauges, Steam Pressure.....	W. H. Allen.....	28,724
Gauges, Steam Pressure.....	W. P. Parrott.....	29,307
Gauges, Water	R. and G. E. Tower.....	26,937
Gauges for Steam Boilers	G. W. Graeber, B. F. Cowan, and A. C. Wurzbach.	27,364
Gauges for Steam Boilers, Salinometer and Water combined.	J. Montgomery	28,003
Gear, Running, of Vehicles.....	R. Murdoch	29,093
Gear, Running, of Vehicles.....	F. L. Kidder	30,482
Gearing	P. D. Cummings.....	28,631
Gearing	H. M. Street	29,634
Gearing for Horse Powers, &c.....	C. Avery.....	28,550
Gearing Machines.....	R. J. Gatling	30,059
Girders, Trussed, Compound.....	J. A. Roebling.....	29,825
Glass, &c., Machine for grinding and polishing.....	A. Broughton.....	28,532
Glass, Manufacture of.....	H. Trumbull	29,020
Glass, Manufacture of.....	S. Wetherill.....	30,439
Glass Vessels, Attachment of Covers to.....	R. D. Bryce	29,666
Glass Vessels, Attachment for Hinged Covers of.....	J. H. Reighard and C. L. Knecht.....	29,718
Glass Vessels, Fastenings for Metallic Covers to.....	J. Bird.....	29,743
Globes	J. Monteith	29,291
Globes, Automatic Terrestrial Time	F. S. Barnard.....	29,755
Globes, School.....	J. R. Agnew.....	29,229
Globes, School, Suspending	J. Monteith.....	29,292
Glue, Machines for cutting... ..	T. Brown, Jr.....	29,541
Glue, Manufacture of.....	L. Reid and J. Rogers.....	27,310
Glue, Preparation of.....	J. M. Hunter	29,596
Glue Pot.....	I. Turner.....	26,957
Gold Separators.....	R. L. Reaney.....	26,784
Gold Separators	R. H. Dunning.....	27,041
Gold Separators.....	J. A. Veatch	30,273
Gold Washer and Amalgamator.....	J. C. Dickey.....	29,771
Gold Washer and Amalgamator.....	J. C. Dickey.....	30,670
Gongs, Improvement in striking mechanism for.....	S. S. Chandler	30,800
Governor Attachment to Grain Separators.....	L. D. Lane.....	29,178
Governors, Centrifugal, for Steam Engines.....	J. Wheelock.....	29,025
Governors for Steam Engines.....	G. W. Rains.....	28,502
Governors for Steam Engines.....	C. P. Buckingham	29,459
Governors for Steam Engines.....	R. W. Gardner	29,579
Governors, Steam Engines.....	S. H. Miller.....	29,986
Grain, Cleaning Machines.....	R. C. Mauck	30,978
Grading Instruments.....	S. L. Donnell	29,955
Grafting Machines.....	J. W. Crawford.....	30,617
Grain Binders	H. Kaller.....	28,584
Grain Binders	W. W. Burson	28,830
Grain Binders	J. S. Hickey.....	29,170
Grain Binding Machines.....	D. W. Ayers	28,338
Grain Binding Machines	T. Courser	29,063

Invention or Discovery.	Name of Patentee.	Number.
Grain Bins	S. Marsh	30,486
Grain, Bleaching by Sulphuric Acid	J. M. Clark	27,887
Grain Cleaners	G. W. Osborn	27,467
Grain Cleaners	A. F. Waldo	27,489
Grain Cleaners	A. Gaar	27,497
Grain Cleaners	P. C. Fritz	28,071
Grain Cleaners	W. B. Webster	28,119
Grain, Cleaning	J. Outram	30,540
Grain, Cleaning	W. Crotzer	30,704
Grain Cleaning Machines	J. P. Tunison	30,099
Grain, Cleaning, when fed to the Mill and Ceoling the Millstones.	W. H. Akins and D. Babcock	28,643
Grain Cradles	E. D. Wilcox	29,346
Grain, Drying and Cooling, Machines for	J. B. Wheeler	30,512
Grain, Drying, Machines for	T. H. McCulloch	27,917
Grain, Drying, Machines for	E. I. Brodne	30,196
Grain, Elevating, Cleaning, and Bagging, Machines for	I. A. Stafford	30,506
Grain Riddles	A. Rowe	30,840
Grain, Scouring, Cleaning, and Polishing, Machines for	G. P. Plant and J. Raith	30,090
Grain, Scouring and Separating	M. Bartholomew	29,237
Grain, Scouring and Separating	D. S. Mackey	30,072
Grain Separators	B. T. Trimmer	27,171
Grain Separators	L. B. Corbin	27,274
Grain Separators	J. Schaeffer	27,834
Grain Separators	J. H. McGehee	27,919
Grain Separators	G. Westinghouse	27,941
Grain Separators	J. A. Vaughn	28,026
Grain Separators	W. T. McGahey and H. C. Foote	28,679
Grain Separators	G. Arrowsmith	29,045
Grain Separators	J. C. Gregg	29,161
Grain Separators	T. Earheart	29,256
Grain Separators	A. J. Vandergrift	29,335
Grain Separators	C. Bergen	29,352
Grain Separators	A. A. Patterson	29,812
Grain Separators	S. M. Wirts	30,017
Grain Separators	M. Bergher	30,047
Grain Separators	G. Sanders and H. Lampton	30,413
Grain Separators	C. B. Hutchings	30,679
Grain Separators	S. and O. Pettibone	30,690
Grain Separators	F. W. Robinson	30,932
Grain Separators and Cleaners	W. M. Arnall	28,046
Grain, Threshing and Cleaning, Machines for	I. Hart	29,374
Grain, Weighing and Bagging	J. M. Fish	28,548
Grain, Weighing, Machines for	J. Williams	27,851
Grain, Weighing, Machines for	D. Squier and E. A. Preston	30,430
Grain, Weighing, Machines for	J. B. Mohler	30,491
Grain Weighing Machines, Automatic	L. Eames	28,262
Grain Winnowing Machines	J. Bean and B. Wright	29,233
Grate bars	D. Lasher	29,977
Grate bars	W. W. Marsh	30,074
Grates, Coal	W. T. McMillen	28,390
Grates for Furnaces	F. E. Purchase	27,155
Grates for Furnaces	C. F. Cory	29,248
Grates for Steam Boilers	F. A. Hull	29,974
Grates, Stove	E. Mingay	28,102
Grates, Stove	D. H. Natson	29,300
Grates, Stove	J. W. Parnell	30,182
Grates, Stove	L. W. Harwood	30,628
Grates, Stove	I. Smith	30,769
Grates, Stove and Furnace	J. V. B. Carter	29,245
Griddles	G. W. Pittock	30,028
Gridirons	E. Webster	27,176
Gridirons	J. S. Brooks and L. S. Grover	29,238
Grindstones, Apparatus for Dressing	J. F. Schuyler	28,639
Grindston Shafts, forming Centre of	D. Hinman	29,375
Grubbing Machines	J. B. Ash	29,659
Gum, Composition for Removing, from Machinery	S. Maxwell	28,001
Gums, Waste and Inferior, Treating	J. Murphy	26,698
Gun Barrels, Manufacture of	J. H. Burton	27,539
Gun Canes	A. Davis	29,676
Gun Stocks	C. R. Alsop	28,433
Guns, Toy	W. H. Stevens	28,698
Guards, Wheel and Dress, for Carriages	W. R. Bush	27,427

H.

Hair Brushes, Blocks for, Shaping	A. G. Mitchell	27,005
Hair, Curled, Picking	W. Adamson	28,447
Halters	L. Whitehead	28,121
Hames for Horse Collars	M. Drew	30,052
Hame Tugs	J. Hovey	28,178
Hame Tugs and Buckles	J. S. Topham	28,700
Hame Tugs, Fastenings for	J. W. Church	30,911

Invention or Discovery.	Name of Patentee.	Number.
Hammers	R. Boecklen	29,760
Hammers, Atmospheric	M. Peck	27,925
Hammers, Guard, for Fire-arms	B. Singleton	28,109
Hammers, Forge	E. Page	30,343
Hammers, Nail	C. Carlisle	30,386
Hammers, Steam	T. Beach	29,854
Hammers, Trip	D. Howell	27,804
Hammers, Trip	A. Morton	30,080
Harmonious	H. W. Smith	29,041
Handcuffs	W. H. Kimball	29,495
Handles, Axe, Fastenings for	J. E. Emerson	27,784
Handles of Canes, &c	J. Harvey and E. Ford	30,225
Handles to Cross-cut Saws, Attaching	I. Pelham	30,153
Handles for Cutlery	M. Chapman	29,465
Handles of Cutlery, Securing	R. H. Fisher	27,790
Handles of Cutlery, Soldering	E. A. Godfrey	28,714
Handles of Cutlery, Soldering	E. A. Godfrey	28,715
Handles, Fastenings for Auger	J. M. Hathaway	29,692
Handles, Fastenings to Axes	W. H. Livingston	30,146
Handles on Hand Screws, Securing	H. Disston	27,354
Handles, Knife	L. Currier	27,349
Handles, Lifting	J. Ottner	28,940
Handles, Pen	W. A. Morse	27,063
Handles to Picks and other Tools, Fastening	J. H. Fisher	29,155
Handles to Saws, Attaching	E. C. Atkins	30,906
Handles of Shovels, Straps for	C. H. Sayre	30,428
Handles, Tool	J. G. Rogers	29,632
Harmonicon, Glass or Metal	J. Koppe	30,230
Harness	S. L. Bond	30,457
Harness, Pads for	J. Ives	27,984
Harness, Traces for	E. Maher	30,855
Harpoons, Explosive	T. Briggs	30,869
Harrows	J. Russell	26,864
Harrows	N. A. Patterson	27,150
Harrows	S. C. Scofield	27,477
Harrows	S. A. and C. C. Morgan	28,890
Harrows	D. C. Colby	28,938
Harrows	Leroy C. Gillaspie	29,073
Harrows	M. W. House	29,885
Harrows	S. Neill	29,903
Harrows	C. Watson	30,280
Harrows	J. Temple	30,789
Harrows	J. Allen	30,905
Harrows, Cultivating	J. Slocum	30,767
Harrows, Rotary	J. Brainard	30,198
Harrows, Rotary	S. S. Hough	30,554
Harrows, Rotary	P. Gwin and E. Foreman	30,728
Harrows, Rotary	F. Raymond	30,759
Harrows, Rotary	M. L. Bandu	30,795
Harrows, Seeding	H. Hewitt	27,668
Harrows, Seeding	W. Finlay	27,789
Harrows, Seeding	M. S. Root	28,411
Harvesters	J. Scoville	27,010
Harvesters	S. and J. H. Buser	27,105
Harvesters	P. Flickinger	27,120
Harvesters	E. Peck	27,151
Harvesters	C. B. Withington	27,252
Harvesters	W. A. Vertrees	27,323
Harvesters	E. Ball and M. L. Ballard	27,511
Harvesters	D. Van Kleeck	27,583
Harvesters	G. E. Chenoweth	27,617
Harvesters	E. Jones	27,636
Harvesters	P. Manny	27,642
Harvesters	J. L. Paxton	27,826
Harvesters	L. C. Reese	27,832
Harvesters	A. and N. Kane	27,989
Harvesters	S. T. Bruce	28,061
Harvesters	W. A. Kirby	28,284
Harvesters	A. Stoler and S. A. Sisson	28,313
Harvesters	R. Bryson	28,557
Harvesters	J. Woodruff	28,625
Harvesters	S. and J. H. Barley	28,727
Harvesters	C. R. Brinckerhoff	29,053
Harvesters	B. A. Jenkins	29,084
Harvesters	G. Farmer	29,685
Harvesters	W. S. Stetson	29,632
Harvesters	J. H. Irwin	29,698
Harvesters	F. H. Manny	29,800
Harvesters	J. M. Long	29,938
Harvesters	H. H. Foye	30,135
Harvesters	T. N. Foster	30,215
Harvesters	F. H. Manny	30,235
Harvesters	S. W. Tyler	30,631

Invention or Discovery.	Name of Patentee.	Number.
Harvesters.....	N. Maxson.....	30,636
Harvesters.....	F. Landon.....	30,655
Harvesters.....	L. D. Browne.....	30,664
Harvesters.....	J. Blue.....	30,953
Harvesters, Cane.....	A. St. Dizier.....	30,361
Harvesters, Cane and Corn.....	D. P. Flynn and R. S. Hayes.....	27,356
Harvesters, Corn and Sugar Cane.....	G. W. N. Yost.....	29,131
Harvesters, Corn.....	H. Gortner and J. McCann.....	27,360
Harvesters, Corn.....	A. Humberger.....	27,720
Harvesters, Cotton.....	W. Apperly and C. P. Johnson.....	30,862
Harvesters, Cutting Apparatus for.....	G. Fetter.....	27,757
Harvesters, Cutting Apparatus of.....	W. G. Smith.....	30,595
Harvesters, Finger Guards for.....	R. Beans.....	27,515
Harvesters, Finger Guards for.....	G. W. Slough.....	28,206
Harvesters, Grain.....	C. Marston.....	29,610
Harvesters, Head Supporting Apparatus for.....	H. C. Howells.....	27,806
Harvesters, Rakes, Automatic, for.....	J. Ollis.....	28,894
Harvesters, Raking and Binding Apparatus for.....	A. B. Smith.....	28,783
Harvesters, Safety Guard for.....	T. Stewart.....	30,006
Harvesters, Sugar Cane.....	W. F. Johnson and J. Doyle.....	30,226
Harvesting Machines.....	B. F. Wilt.....	27,852
Harvesting Machines.....	M. Hallenbeck.....	27,901
Harvesting Machines.....	J. A. Wagener.....	28,427
Harvesting Machines.....	B. Titcomb.....	28,618
Harvesting Machines.....	W. Wilmington.....	29,026
Harvesting Machines.....	J. M. Bowman.....	29,119
Harvesting Machines.....	J. H. Rible.....	29,129
Harvesting Machines.....	J. H. Maydell.....	29,504
Harvesting Machines.....	B. Mertz.....	29,985
Harvesting Machines.....	S. T. Lamb.....	30,330
Harvesting Machines.....	J. S. Royce.....	30,933
Harvesting Machines.....	McC. Young, Jr.....	30,999
Harvesting Machines, Cutting Apparatus for.....	S. T. Lamb.....	30,231
Hatchets.....	M. E. Rudasill.....	30,692
Hatchways, opening and closing, Apparatus for.....	E. C. Ford.....	30,134
Hats.....	J. R. Ender.....	27,897
Hats, Cigar Racks for.....	F. I. Miller.....	28,763
Hats, Racks for cigars, &c., in.....	C. Branwhite.....	28,034
Hats, Conformatures of.....	J. Dickson, Jr.....	28,564
Hats, Manufacture of.....	W. F. Warburton and C. E. Lovett.....	27,848
Hats, shaping, Apparatus for.....	S. H. Apple, B. Lindheim, and H. Baer.....	30,791
Hats, Ventilation of.....	J. McManus.....	26,692
Hats, Ventilation for.....	J. Jenkinson.....	27,985
Hats, Ventilation for.....	A. Maginnis.....	29,984
Hats, ventilated.....	W. F. Warburton.....	30,900
Hats, Ventilating, Sweat Leathers for.....	J. Pollock.....	30,643
Hat Brims, curling.....	F. S. Sibley.....	30,379
Hat Bodies, felting.....	J. B. Blakslee and S. S. Middlebrook.....	26,744
Hat Bodies, felting, Machinery for.....	M. R. Lemman.....	28,185
Hat Bodies, forming, Machines for.....	S. Boyden.....	26,811
Hat Bodies, forming, Machines for.....	L. Platt and R. Wildman.....	29,441
Hat Bodies, forming, Machines for.....	W. Huzzard.....	29,478
Hat Blocks, Machines for turning.....	I. H. Masker.....	26,691
Hay, &c., Elevators for.....	F. F. Fowler.....	27,899
Hay, &c., hoisting.....	J. S. Lloyd.....	27,994
Hay, loading.....	W. Dixon.....	28,839
Hay, loading.....	T. J. Jolly.....	28,868
Hay, unloading.....	W. H. Angell.....	28,822
Hay Elevators.....	W. E. Durkee.....	28,713
Hay Racks for carts.....	H. P. Hawkins.....	29,075
Head Rests.....	J. W. Lockwood.....	27,058
Head Rests for travellers in railroad cars, &c.....	G. Utley.....	27,395
Heaters, Sad Iron.....	W. J. Andrews.....	28,546
Heating Apartments by hot water, Apparatus for.....	J. F. Hunter and F. W. Geissenhainer.....	30,065
Heating Apparatus.....	L. Bridges.....	28,805
Heating Apparatus, Steam.....	L. W. Leeds and C. Vaux.....	28,493
Heating Apparatus, Steam.....	G. W. Richardson.....	28,504
Heating Apparatus, Steam.....	C. A. Wilson.....	29,932
Heating Buildings, Apparatus for.....	G. Marlow.....	29,983
Heating and Cooking, Apparatus for.....	E. Conway.....	29,769
Heating Rooms.....	L. Newson.....	29,710
Heating and Ventilating Buildings.....	M. W. Lester and M. Hjorstberg.....	26,686
Hinges.....	H. M. Zimmerman.....	28,937
Heels for Boots, Attaching and finishing.....	H. Saloshiniskey.....	27,008
Heels for Boots and Shoes.....	P. Shaw.....	26,712
Heels for Boots and Shoes.....	G. W. Keene.....	27,369
Heel for Boots and Shoes.....	D. E. Somes.....	29,326
Heels for Boots and Shoes.....	D. E. Somes.....	30,094
Heels for Boots and Shoes.....	W. H. Peckham.....	30,542
Heels, Boots and Shoes, Cutting.....	E. T. Green.....	30,376
Heels, Boots and Shoes, Dressing.....	J. S. Stuart and A. L. Corson.....	30,508
Heels, Metallic, for Boots and Shoes.....	J. V. Dinsmore.....	27,702
Heel Guards for Boots and Shoes.....	W. A. Harris.....	28,575

Invention or Discovery.	Name of Patentee.	Number.
Heel Shaves.....	D. E. Somes.....	30,648
Helix, Electro-magnetic.....	M. Vergnes.....	30,271
Hides, Preparing.....	D. Aldrick.....	27,338
Hides, Preparing.....	A. D. Lufkin.....	29,392
Hinges.....	J. Jones.....	27,056
Hinges.....	A. W. Sweeny.....	28,944
Hinges.....	F. C. Adams and J. Peckover.....	30,555
Hinges, Blind.....	E. R. Shepard.....	30,281
Hinges, Butt.....	G. H. Fayman.....	27,788
Hinges, Butt.....	J. E. Shields.....	28,510
Hinges, Butt.....	J. Johnson.....	30,970
Hinges, Gate.....	D. Wadsworth, Jr.....	30,600
Hinges, Spring.....	A. Acker.....	29,212
Hinges, Spikes for.....	H. Garrett.....	29,480
Hinges, Stop.....	H. Pennie.....	30,587
Hoes.....	H. Porter.....	27,382
Hoes, Garden.....	J. R. Albertson.....	27,675
Hoes, Making.....	M. Depuy.....	30,569
Hoes, Seeding.....	Z. B. Brown.....	30,526
Hog Elevator.....	D. Kaufman.....	27,368
Hogs from rooting, Device for preventing.....	D. K. Nixon.....	30,928
Hoisting Apparatus.....	J. L. Potts.....	26,921
Hoisting Apparatus.....	J. Lemman.....	29,180
Hoisting Machinery.....	R. A. Wilder.....	28,122
Hoisting persons, &c., Machines for.....	I. H. Hobbs.....	28,273
Hoisting and weighing, Machines for.....	J. L. Dutton, Sen.....	27,623
Holders, Label.....	F. J. Collier.....	30,205
Holders, Map.....	B. W. Bruel.....	29,566
Holders for polishing wheels.....	E. W. Nichols.....	29,512
Holders for tinman's shears.....	A. Worden.....	27,018
Hollow Ware, Spinning Metallic.....	J. Gray.....	28,075
Hominy Machines.....	J. Gehr.....	29,159
Hooks, Bench.....	R. Frisbie.....	29,070
Hooks, Cant.....	P. Hinds.....	26,737
Hooks, Catch, for doors.....	C. B. Richards.....	28,241
Hooks, Detachable, for suspending boats.....	C. L. Williams.....	28,623
Hooks, Dress, Self-fastening.....	J. W. Strange.....	28,213
Hooks, Mousing.....	S. G. Coleman.....	28,126
Hooks, Mousing.....	H. Wymblad.....	29,029
Hooks, Mousing.....	J. North.....	30,687
Hooks, Self-mousing.....	J. R. Henshaw.....	28,669
Hooks, Snap, for harness.....	J. North.....	30,084
Hooks, Spring, for clothing.....	J. C. Loveland.....	30,683
Hooks for watch chains.....	E. N. Foote.....	28,842
Hooks for watch chains.....	J. R. Lownsberry.....	29,088
Hooks and Eyes.....	D. M. Smith.....	28,443
Hoops, &c., Bale, machine for straightening.....	C. Hughes.....	30,322
Hoops, Cheese.....	H. A. Roe.....	29,824
Hoops, cutting and distancing locks on.....	A. H. Crozier.....	27,206
Hoops, Machines for.....	S. F. Atherton.....	30,609
Hoops, Machines for Splitting.....	S. F. Atherton.....	28,048
Hoops, Metal, securing on cotton bales.....	J. McMurtry.....	27,866
Hoops, Sawing, Machines for.....	J. Raub.....	29,993
Hoops, Skirt.....	R. Stokes and D. J. Jones.....	28,790
Hop Frames.....	L. A. Beardsley.....	26,743
Hops, Preserving.....	J. C. and M. D. Baldwin.....	30,113
Horse Collars.....	E. W. Briding and F. G. Maxwell.....	30,715
Horse Collars.....	J. Ende.....	30,912
Horse Powers.....	F. W. Robinson.....	26,786
Horse Powers.....	W. P. Penn.....	27,235
Horse Powers.....	N. S. Dodge.....	27,278
Horse Powers.....	C. S. Graves.....	27,795
Horse Powers.....	E. B. Requa.....	27,928
Horse Powers.....	O. W. Stanford.....	28,018
Horse Powers.....	W. A. Gliddon and A. Starkweather.....	28,468
Horse Powers.....	B. Bogue.....	29,855
Horse Powers applied to mills.....	B. E. Orton.....	27,468
Horse Powers, propelling machinery by.....	J. Stoddard.....	30,362
Horse Shoeing.....	G. R. Stevens.....	29,016
Horse Shoe Machines.....	T. R. Taylor.....	27,750
Horse Shoe Machines.....	H. A. Wills.....	29,042
Horse Shoe Machines.....	J. Desnos.....	29,365
Horse Shoe Machines.....	J. McCarty.....	30,448
Horse Shoe Machines.....	J. McCarty.....	30,656
Horse Shoes.....	J. Carlin.....	26,832
Horse Shoes.....	R. A. Goodenough.....	28,469
Horse Shoes.....	T. M. Coleman.....	28,656
Horse Shoes, Punching, Machines for.....	C. H. Smith.....	30,689
Horses, Attaching, to vehicles.....	A. Avery.....	30,037
Horses, &c., Attaching, to two-wheeled vehicles.....	J. W. Barnes.....	30,455
Horses, Breast Collars for.....	J. R. Taylor.....	30,775
Horses, Detaching, from carriages.....	J. Davis.....	30,566
Horses, Detaching, from carriages.....	S. Kepner.....	30,972

Invention or Discovery.	Name of Patentee.	Number.
Horses, Detaching, from vehicles	A. B. Johnson, M. H. Vaughan, and J. Stinnett.	28,988
Horses, Detaching, from vehicles	J. M. Roberds	29,313
Horses, Device to prevent, from cribbing	W. H. Bishop and A. H. Low	29,354
Horses from Fire, Apparatus for rescuing	E. French	29,360
Horses, Head Gear for stopping runaway	J. Koehler	27,952
Horses' Hoofs, Instruments for Paring	A. Baker	29,543
Horses, from interfering, Device to prevent	W. Somerville	28,017
Hose, India Rubber, Making	T. J. Mayall	30,637
Hose, Rubber, Making	T. J. Mayall	28,988
Hose, Rubber, Manufacture of	T. J. Mayall	28,388
Hose, Water Proof	H. A. Alden	30,032
Hose Pipes	G. Smith	28,694
Hose Protectors	W. E. Bridge and D. P. Dieterich	30,199
Hose Tubing	T. J. Mayall	27,553
Hose Tubing	C. McBurney	27,819
Hose Tubing	H. A. Alden	26,231
Hose Tubing, Flexible	H. A. Alden	28,432
Hose Tubing, Rubber	T. J. Mayall	28,389
Hullers, Cotton Seed	P. Martin	29,393
Hullers, Rice	J. M. Hendricks	28,485
Hullers, Rice and Clover	S. Burrows	28,151
Hubs for carriage wheels	J. F. Beckwith	27,611
Hubs, Metallic, for carriages	H. Boardman	27,097
Hubs, Metallic, for carriage wheels	N. T. Edson	30,395
Hubs, Metallic, for carriage wheels	J. Johnson	30,681
Hydrants	G. W. Robertson	26,931
Hydrants	A. Johnson	28,694
Hydrants	A. Fuller	29,872
I.		
Ice Breakers	C. W. Chapman	28,966
Ice Picks	J. T. Van Kirk	29,220
Ice or Snow, conversion of, into large blocks	H. Morse	28,292
India Rubber Goods, finishing felt	J. T. Trotter	26,720
India Rubber Goods, finishing surface of	J. T. Trotter and I. F. Williams	28,420
India Rubber Tips, vulcanizing	H. B. Goodyear	30,675
India Rubber, treatment of	A. K. Eaton	28,744
India Rubber, vulcanizing, Apparatus for	G. E. Hayes	28,668
India Rubber, vulcanized, restoring waste	C. F. E. Simon	27,837
India Rubber, vulcanized, restoring waste	D. D. Parmelee	30,181
India Rubber, waste, devulcanizing	A. C. Richard	29,717
See also Caoutchouc.		
Indicators, Price	P. Topham	27,084
Inkstands	J. R. Ender	26,661
Inkstands	H. Evans	26,755
Inkstands	T. P. How	26,992
Inkstands	M. Baum	27,200
Inkstands	S. Slocomb	30,257
Inkstands	W. H. Towers	30,266
Inoculating Apparatus	A. Stauch	28,697
Insects, Apparatus for destroying	A. Isaacsen	29,699
Insects, Apparatus for protecting Trees from	N. Potter, Jr.	29,098
Insects, Composition to prevent the depredations of	F. G. Johnson	27,637
Insects, Shields for the Head against	J. Haom	30,818
Insulators, Electro, Frame for	L. Engler and E. F. Krauss	28,263
Iron, Bars of cast or wrought, constructing	C. McCammon	27,141
Iron, manufacture of	W. G. Brown and F. McKee	27,688
Iron, restoring burnt	G. W. Morris and W. Guann	28,103
Iron into Steel, converting	E. G. Pomeroy	29,909
Iron into Steel, converting	T. Sheehan	29,919
Iron, Smelting and Refining	E. G. Pomeroy	26,923
Iron, Smoothing, heating	J. E. Johnson	29,379
Iron, Smoothing, and Lamp, combined	L. Bricker	29,949
Iron, Smoothing, self-heating	E. O. Ball	29,048
Iron, Wrought, welding of	J. C. Cooke	27,697
Irons, Soldering	A. Burbank	27,185
Irons, Soldering	L. Patee	29,039
J.		
Jacks	R. Wood	27,494
Jacks, Boot	J. Durham	30,913
Jacks, Carriage	J. Card	30,120
Jacks, Carriage	J. J. Pike	30,346
Jacks, Lifting	W. C. Anderson	28,245
Jacks, Lifting	G. Benjamin	30,043
Jacks, Lifting	W. J. Lane	30,484
Jacks, Pegging Machine	W. Fitzgerald	28,358
Jacks, Railroad	F. H. Furniss	28,268
Jacks, Wagon	L. H. Colby	27,525
Jars, Fruit	J. C. Baker	29,557

Invention or Discovery.	Name of Patentee.	Number.
Jewelry	J. J. Huber.....	26,678
Jewelry, Process of embossing Designs on Metal for...	W. Riker.....	27,474
Joints, dressing, Machines for	J. H. Story	29,749
Joints, Drop-light.....	T. G. Arnold	28,548
Joints, Flexible, for Gas Tubes	A. Stratton	29,113
Joints, Gas and Water Pipe	C. W. Isbell.....	29,281
Joints, Plumbers', making.....	J. P. Hayes.....	28,750
Joints, Railroad.....	L. B. Tyng.....	30,014
Joints, Railroad	J. M. Heard	30,629
Joint Locks for Railway Bars	A. Douglass	29,681
Journal Bearings and Boxes, Metallic Alloy for.. ..	G. Sherman	29,525
Journal Boxes	J. Bryant.....	26,747
Journal Boxes	I. P. Wendell.....	27,940
Journal Boxes	M. Queen	29,817
Journal Boxes	P. S. Devlan.....	30,128
Journal Boxes, anti-friction	W. S. Pratt.....	28,195
Journal Boxes for railroad cars	H. Jackman	28,129
Journal Boxes for railroad cars	J. Ashenfelder.....	29,349
Journal Boxes for railroad cars	H. Rice	29,551
Journals, Lubricating	E. Andrews and J. H. Carr.....	27,416
Journals, Lubricating	E. Andrews and J. H. Carr.....	28,735
K.		
Kaleidoscopes.....	A. C. McNulty and D. Lyman, Jr.	30,238
Kettle Ears, making	M. Wells.....	28,222
Keys	J. Deally	28,457
Keys, attaching bows to.....	E. L. Gaylord.....	28,466
Keys, Metallic, fasteners for	C. L. Rehn.....	30,350
Keys, Piano Forte	C. J. Schoenemann	29,522
Keys, Watch, and Calendar.....	H. C. Foote.....	26,817
Keys, Watch, and Guard Bar	D. F. Elmer	28,846
Key Holes, Guards for	T. G. Harold.....	28,535
Key Holes, Guards for	G. Wheeler.....	30,368
Key Seats, &c., Machines for cutting.....	W. B. Bement.....	28,627
Kilns, Malt, Floors for	H. Franz.....	30,137
Knife Cleaners	J. Detheridge, Jr.	30,468
Knife and Fork Cleaners.....	J. Protz	27,472
Knife and Fork Cleaners.....	S. Brackett.....	27,773
Knife, Currying.....	W. P. Moses	28,594
Knife Sharpeners.....	S. C. Stokes.....	27,413
Knife Sharpeners and Cleaners	J. N. Farnham.....	27,787
Knives, Cutting, cylindrical method of sharpening ..	J. H. and A. T. Goodell	28,074
Knitting Machines.....	C. J. Appleton.....	27,183
Knitting Machines.....	J. Chantrell.....	27,430
Knitting Machines.....	E. Tiffany.....	28,133
Knitting Machines.....	J. Chantrell.....	28,255
Knitting Machines.....	W. H. McNavy.....	28,290
Knitting Machines.....	W. Aikin.....	29,450
L.		
Labels for mail bags, &c	T. P. Trott	28,023
Ladders, Extension.....	G. B. Mickle and J. M. Carville	27,821
Ladders, Extension.....	F. and C. Kavemann and B. Hoerstmann..	28,039
Ladles, Bullet	G. Bugg.....	28,013
Ladles, with Forks attached	N. S. Warner and H. S. Benedict	30,437
Lamps	T. Houghton	26,767
Lamps	J. K. Leedy	26,910
Lamps	G. Neilson	26,952
Lamps	S. Guthrie.....	27,124
Lamps	C. Van Bonhorst.....	27,248
Lamps	Z. Swope	27,500
Lamps	J. Stuber	28,132
Lamps	O. Sauley	28,199
Lamps	E. J. Hale.....	28,666
Lamps	C. Miller.....	28,683
Lamps	O. and H. S. Snow	28,695
Lamps	J. C. Jennison and A. Hale.....	28,717
Lamps	E. J. Hale.....	28,749
Lamps	E. J. Hale.....	28,855
Lamps	I. W. Taber.....	29,203
Lamps	J. T. Van Kirk	29,221
Lamps	W. Fulton	29,260
Lamps	S. Sargent	29,321
Lamps	J. Schley.....	29,324
Lamps	J. Adair.....	29,347
Lamps	G. Blanchard.....	29,456
Lamps	T. B. Smith.....	29,831
Lamps	J. T. Williams	29,838
Lamps	G. Neilson	30,082
Lamps	H. J. Bachelder.....	30,104
Lamps	A. Kleinsteinber.....	30,377

Invention or Discovery.	Name of Patentee.	Number.
Lamps	J. E. Ambrose	30,381
Lamps	H. W. Dopp	30,444
Lamps	F. B. De Keravenan	30,466
Lamps	W. H. Racey	30,546
Lamps, Chimney, securing	J. J. Marcy	30,856
Lamps, Coal Oil	R. S. Merrill	28,762
Lamps, Generating Vapor in	W. S. Mead	27,061
Lamps, lighting, Device for	G. K. Proctor	26,953
Lamps for Locomotives	J. Radley	29,402
Lamps, Self-lighting	T. W. Carroll	26,884
Lamps, Sub-marine	L. H. Hasse	30,314
Lamps, Torch, Hanging	C. H. Cooper	30,048
Lamps or Torches, Swinging Frames for	L. T. Pitkins	30,089
Lamps, Vapor	L. T. Conover	27,272
Lamps, Vapor	H. Johnson	27,293
Lamps, Vapor	H. Johnson	27,912
Lamps, Vapor	M. V. B. Buell	28,063
Lamps, Vapor	T. G. Clayton	28,258
Lamps, Vapor	I. W. Pettibone	28,299
Lamps, Vapor	J. H. Rollins	28,306
Lamps, Vapor	A. Geiger	28,467
Lamps, Vapor	T. S. Ray and A. C. Rand	28,503
Lamps, Vapor	S. W. Lowe	28,536
Lamps, Vapor	J. Clarke	28,652
Lamps, Vapor	C. W. Richter	28,691
Lamps, Vapor	G. Walker	28,924
Lamps, Vapor	E. Crooker	29,124
Lamps, Vapor	I. Van Bunschaten	29,421
Lamps, Vapor	W. B. Billings	30,194
Lamps, Vapor	C. E. Atherton	30,556
Lamps, Vapor	H. W. Dopp	30,621
Lamps, Vapor	F. W. Williard	30,899
Lamps, Vapor	J. S. Gray	30,965
Lamps, Vapor, Generators for	S. D. Baldwin	28,143
Lanterns	T. B. De Forrest	27,186
Lanterns	J. B. Jones	27,332
Lanterns	A. Tufts	27,485
Lanterns	T. B. De Forrest	27,666
Lanterns	T. B. De Forrest	27,892
Lanterns	P. A. Morley	27,924
Lanterns	J. D. Brown	28,450
Lanterns	T. B. De Forrest	29,472
Lanterns, Carrier	S. J. Shaw and H. J. Batchelder	27,315
Lanterns, Signal	T. F. Woodward	29,118
Laps, Winding	J. L. Cheney	28,256
Lard Expressors	C. Bixler	26,879
Lasts, Shoe	F. Maynard	30,148
Lasts, Shoemakers'	J. C. Plumer	29,225
Last Holders	A. G. Mack	27,229
Last Holders	J. Dickinson	30,620
Lasting Machine	W. Wells	28,120
Latches, Door	R. L. Underhill	28,425
Latches, Door	T. Slaight	30,594
Latches, Gate	E. Manross	26,774
Latches for Sliding Doors	H. Belfield	26,809
Lath Machines	J. W. McLean and A. Gummer	28,883
Lath Machines	G. W. Corson	29,062
Lath Machines	R. J. Gatling	29,072
Lathes	J. Cook	27,696
Lathes	J. M. Scribner	28,308
Lathes	M. Roberts	29,103
Lathes	B. D. Whitney	29,534
Lathes	L. Postlewait	30,420
Lathes, Back Centre of	A. Lafever and G. C. Barnes	26,998
Lathes, Back Rest for	W. H. Hendrick and J. Jacobs	26,988
Lathes, Dogs for, Automatic	A. E. Wenzel	30,997
Lathes, Operating Feed Nuts in	W. A. Patrick	27,149
Lathes, Turning	W. Sellers	24,478
Lathes for Turning Irregular Forms	D. Werst and A. Puderbaugh	27,178
Lathes, Watchmaker's	A. Wild	29,227
Lead, Chloride of, Manufacture of	F. F. Meyer	30,521
Lead, Oxy-chloride of, Making	L. Brumlen	29,665
Leather, Buffing and Reducing, Machines for	J. Turner	28,641
Leather Cloth, Ornamenting	A. Pellet	30,242
Leather Currying and Dressing Machines	R. P. Boyce	27,885
Leather, Cutting, Machines for	J. W. Richardson	30,761
Leather, Cutting and Splitting	J. Edson	26,977
Leather, Damping, Machines for	R. Martin	30,788
Leather, Finishing	R. L. and C. Smith	26,792
Leather, Finishing	W. P. Martin	28,108
Leather, Finishing	S. P. Cobb	28,562
Leather Goods, Water Proof	S. La Forge	27,337
Leather, Machines for crimping	H. Wing	29,429

Invention or Discovery.	Name of Patentee.	Number.
Leather, Machines for finishing.....	W. P. Martin.....	27,300
Leather, Machines for skiving.....	W. S. Williams.....	29,428
Leather, Machines for skiving.....	S. Keen.....	30,736
Leather, Machines for trimming, chamfering and skiving.....	W. H. Rounds.....	27,073
Leather, Oiling.....	L. Holcomb.....	30,320
Leather Paper, Stock Manufacture of.....	E. and J. R. Cushman.....	29,672
Leather, Polishing.....	R. A. Stratton.....	26,932
Leather Polishing Machines.....	G. S. Adler.....	27,028
Leather, Skiving.....	E. T. Ingalls.....	28,580
Leather Splitting Machines.....	J. F. Flanders.....	29,649
Leather Splitting Machines.....	S. S. Turner.....	30,553
Leather Splitting Machines, Feed of.....	D. H. Chamberlain.....	28,559
Leather Stretching Machines.....	J. H. Haskell.....	28,271
Leather, Tanned, treatment of.....	A. Dietz.....	30,393
Legs, Artificial.....	D. D. F. Douglass.....	26,753
Legs, Artificial.....	B. W. Jewett.....	29,494
Lemon Squeezers.....	L. S. Chichester.....	28,967
Lenses, Fluid.....	S. Kakeles.....	27,988
Letters, Copying, Apparatus for.....	A. L. Adams.....	30,283
Levels, Spirit.....	W. T. Nicholson.....	28,104
Levels, Spirit, attaching to a square.....	J. Steger.....	26,956
Levels, Surveyor's.....	S. D. Hailey.....	26,762
Lightning Arrester for Telegraphs.....	D. F. S. Ways.....	29,533
Lightning Rods.....	D. Wooster.....	29,933
Lightning Rods.....	N. Brittan.....	30,560
Lightning Rods, construction of.....	J. M. Patterson.....	29,398
Lightning Rods, insulating and supporting.....	M. Fox.....	27,977
Lights, Port, for Vessels.....	G. C. Courlay.....	30,519
Lights, Side, for Ships.....	E. Hidden.....	29,079
Lights, Street.....	J. H. Kalb.....	29,382
Life Preservers.....	N. Platt.....	27,066
Liquids, Evaporating.....	E. Constantine.....	28,158
Liquids, Evaporating.....	G. Stephenson.....	28,211
Liquids, Freezing.....	F. P. E. Carré.....	30,201
Liquids, Measuring.....	J. C. Ranken.....	28,690
Liquids, Measuring, Apparatus for.....	H. James.....	28,581
Liniments, Anti-rheumatic.....	J. A. Scheutz.....	27,389
Locks.....	L. Diss.....	26,659
Locks.....	G. and G. F. Ellicott.....	27,262
Locks.....	H. Isham.....	27,294
Locks.....	W. E. Worthen.....	27,854
Locks.....	L. Derby.....	28,162
Locks.....	A. Rankin.....	28,406
Locks.....	L. Yale, Jr.....	28,710
Locks.....	E. W. Brettell.....	28,828
Locks.....	C. F. Brown.....	29,120
Locks.....	W. H. Greenwood.....	29,588
Locks.....	E. P. Whitney.....	29,929
Locks.....	C. F. and C. F. Johnson, Jr., and W. W. Johnson.....	29,975
Locks.....	G. Rosner.....	30,092
Locks.....	J. L. Hall.....	30,140
Locks.....	W. S. Kirkham.....	30,580
Locks.....	L. Layman.....	30,606
Locks, Alarm.....	J. Ziegler.....	27,856
Locks, Burglar-proof Sockets for, &c.....	W. J. Scott.....	30,160
Locks, Canal and River.....	J. Davis.....	30,564
Locks, for Carpet Bags.....	Z. Walsh.....	26,959
Locks, Combination.....	J. H. Morse.....	30,830
Locks for Cotton Bales.....	A. P. Merrill, Jr.....	28,392
Locks, Door.....	H. Lockwood.....	28,092
Locks, Door.....	C. Adams.....	28,949
Locks, Door.....	J. E. Parker.....	30,586
Locks, Door.....	J. Kinger.....	30,654
Locks for Fire Arms.....	J. P. Lindsay.....	30,332
Locks, Freight Car.....	J. F. Keeler.....	30,229
Locks, Hoop.....	A. P. Merrill.....	28,694
Locks, Hoop, for metal bale hoops.....	C. H. Dubs.....	28,164
Locks, Knob.....	J. Adt.....	30,902
Locks and Labels, Sheaths for.....	S. W. Marsh.....	27,728
Locks, Permutation.....	W. A. Carpenter.....	27,202
Locks, Portable Door.....	E. G. F. Arndt.....	30,035
Locks, Seal, for railroad cars.....	J. H. Lyon.....	29,181
Locks, Sealing, for railroad cars.....	J. Clark.....	27,524
Locks, Table.....	W. Manheimer.....	28,093
Locks, Trunk.....	S. Bourne, Jr.....	28,056
Locks for Travelling Bags.....	S. Bourne, Jr., and J. G. Cunningham.....	28,057
Locks for Umbrella Stands.....	A. M. Foote.....	27,043
Looms.....	T. Lovelidge.....	27,136
Looms.....	J. J. Kendall.....	27,296
Looms.....	J. C. Cooke.....	27,860
Looms.....	H. Conant.....	27,889

Invention or Discovery.	Name of Patentee.	Number.
Looms	T. Clarkson.....	28,125
Looms	J. H. Clifton.....	28,453
Looms	L. R. Wattles.....	29,427
Looms	A. Parkinson.....	30,948
Looms, Harness Frames for	J. Greenhagh, Sr.....	28,270
Looms, Narrow ware	B. Hardy.....	28,135
Looms, Pattern Chain for	B. H. Jenks.....	29,283
Looms, Power.....	W. H. Gray.....	26,875
Looms, Power.....	M. A. Furbish and G. Crompton.....	29,873
Looms for weaving Hair Cloth	J. Angell.....	30,652
Lotions, Medicated.....	J. G. Popp.....	30,834
Lozenge Machines.....	R. Sowle.....	28,815
Lozenges, Cutting.....	W. J. McClelland.....	28,239
Lozenges, Making	G. Kober.....	28,381
Lubricating, Composition for.....	C. Chiterling.....	29,243
Lubricating Compounds.....	J. B. McMunn.....	26,693
Lubricating Compounds.....	V. Radspinner and W. H. Moss.....	29,005
Lubricating Engines, Method of.....	J. Marks.....	30,416
Lubricators	J. S. Lapham.....	27,548
Lubricators	E. B. and T. S. Parker.....	29,515
M.		
Mail Bags, &c., Labels for.....	T. P. Trott.....	28,023
Malt Kilns, Floors of.....	T. S. Smith.....	27,237
Malt Liquors, preserving and discharging.....	M. Reeder.....	26,930
Mangers.....	J. E. Kelly.....	27,812
Mangles.....	G. Coombs.....	27,890
Mangles.....	W. D. Grimshaw.....	30,812
Manure Spreader and Roller, combined.....	J. Lyker.....	30,179
Marble, Artificial, Manufacture of	R. Lamb.....	27,022
Marble, &c., Carving, Machines for.....	W. H. Pease.....	27,827
Marble, Polishing, Machines for	W. Emmett.....	27,538
Manganese, Oxide of, Manufacture of	C. T. Dunlop.....	29,474
Masts, Top, Attachment of Yards to.....	S. Hall.....	28,354
Match Cases	D. Ellis and P. Hine.....	27,974
Match Safes.....	L. Burnell.....	26,648
Match Safes, Pocket.....	A. M. Smith.....	26,865
Mattresses and Beds.....	F. Elder.....	29,066
Mattresses, Cutting Shavings for	F. Skinner.....	26,791
Mattresses, Life-preserving.....	L. Banhoefer.....	30,794
Mattresses, Spring	H. Jury.....	29,600
Mattresses, Spring.....	L. Whitehead and S. P. Kittle.....	29,846
Mattresses, Ventilating, Spring.....	R. W. Geraghty.....	27,667
Meat Choppers	C. B. Becker.....	28,145
Meats, Packing, Construction of Buildings for.....	D. E. Somes.....	30,770
Meats, Preserving.....	G. W. Oliver.....	28,812
Meat and Vegetable Choppers	L. S. Chichester.....	29,766
Medical Compounds.....	J. J. Reeves.....	28,904
Medical Topical Applications	G. E. B. French.....	26,663
Medicinal Extracts, Preparation of	A. J. Despinoy.....	30,050
Medicines, Astringent	E. W. Ferris.....	30,396
Metallic Composition for Fusible Alloy and other purposes.....	B. Wood.....	27,590
Metallic Hollow Ware, Spinning.....	J. Gray.....	28,075
Metals, Composition for cleaning and silvering.....	E. Todd, C. P. and J. Brockett.....	27,425
Metals for Jewelry, Process of embossing Designs on.....	W. Riker.....	27,474
Metals, Pig, Franklinite, Method employed for making, grinding, and abrading surfaces.....	T. Sellock.....	28,107
Metal Plates, Joining	E. Jacobs.....	27,222
Metal, Sheet, Bending	O. W. Stow.....	27,319
Metal, Sheet, Bending	H. Evans, Jr.....	30,532
Metal, Sheet, forming Cornices of, Machines for	J. Lee.....	28,676
Metal, Sheet, forming hollow articles of	A. Conradt.....	27,351
Metal, Sheet, forming Vessels of	J. B. Jones.....	27,911
Metal, Sheet, Machines for cutting.....	J. Waugh.....	28,027
Metal and Wood, finishing Works in	G. Storer.....	28,818
Meters, Gas, Dry	C. L. Vasquez.....	27,847
Meters, Gas, Dry	R. H. Gratz and C. C. Floyd.....	30,524
Meters, Gas	J. Schatt.....	29,323
Meters, Gas	N. Tufts, Jr.....	29,639
Meters, Gas	G. J. Willson and D. H. Fox.....	29,740
Meters, Water.....	E. P. and J. N. Farrar.....	27,118
Meters, Water.....	G. Sickles.....	29,316
Meters, Wet Gas	W. Richards.....	27,567
Melodeons	C. J. Van Oeckelen.....	29,023
Melodeons	S. H. Jones.....	29,037
Milkers, Cow.....	L. O. Colvin.....	28,351
Milkers, Cow.....	L. O. Colvin.....	28,455
Milk Pans, Racks for	G. B. Lewis.....	26,688
Mills.....	F. B. Hunt.....	26,818
Mills.....	G. D. Jones.....	27,224
Mills.....	L. Coleman.....	28,655

Invention or Discovery.	Name of Patentee.	Number.
Mills.....	E. D. Clark.....	28,834
Mills.....	H. C. Velle.....	28,923
Mills.....	W. Joslin.....	28,989
Mills.....	A. H. Wagner.....	29,422
Mills, Bark.....	W. Fausley.....	28,518
Mills, Cider.....	R. M. Curtice.....	23,752
Mills, Cider.....	E. H. Philo.....	27,650
Mills, Coffee.....	J. and E. Parker.....	27,065
Mills, Coffee, Grinding.....	L. S. Chichester.....	30,228
Mills, Conical, Grinding.....	A. W. Sweet.....	27,246
Mills, Corn and Cob.....	S. A. Briggs.....	29,033
Mills for cutting and grinding Corn Cobs and Husks together.	E. Mire.....	29,509
Mills, Fanning.....	B. F. Roe.....	29,998
Mills, Feeding Grain to.....	M. H. Ferguson.....	29,961
Mills, Flour.....	J. M. Clark.....	26,751
Mills, Grain.....	J. W. Wheeler.....	27,250
Mills, Gig.....	J. Shaw.....	29,828
Mills, Grinding.....	T. E. Hunt.....	26,738
Mills, Grinding.....	J. Bryant.....	27,102
Mills, Grinding.....	O. W. Stamford.....	27,164
Mills, Grinding.....	W. Stewart.....	27,579
Mills, Grinding.....	E. Munson.....	27,735
Mills, Grinding.....	S. Moore.....	28,681
Mills, Grinding.....	J. Ruof, A. Heupel, and F. Leuthy.....	29,010
Mills, Grinding.....	D. Read.....	29,521
Mills, Grinding.....	P. G. McCulla.....	29,612
Mills, Grinding.....	E. J. Hyde.....	30,407
Mills, Grinding.....	C. W. Shedd.....	30,552
Mills for grinding Grain and Apples.....	C. B. Hutchinson.....	29,490
Mills, Grist.....	C. Badger.....	28,434
Mills, Grist, collecting toll from.....	T. R. Van Gelder.....	27,582
Mills, Gunpowder.....	B. Potter, Jr.....	26,922
Mills, Hominy.....	J. D. Heatwole and R. C. Mauck.....	28,079
Mills, Hominy, Separators for.....	J. Donaldson.....	26,893
Mills, Paint.....	J. A. Becrill.....	30,288
Mills, Plates to.....	S. Hull.....	28,373
Mills, Portable.....	N. Burr.....	29,462
Mills, Saw.....	J. H. Jenkins.....	27,021
Mills, Saw.....	C. P. Morton.....	28,005
Mills, Saw.....	G. H. Clemens.....	29,058
Mills, Saw, feed motion for.....	E. G. Dyer.....	29,682
Mills, Saw, feed motion for head blocks of.....	E. G. Dyer.....	30,623
Mills, Saw, head block for.....	J. W. Truax.....	29,845
Mills, Smut.....	A. Walze.....	27,182
Mills, Sugar.....	G. W. L. Hazen.....	27,903
Mills, Sugar Cane.....	H. T. Douglas.....	29,773
Mills, Sugar Crushing, Rollers for.....	P. W. Gates.....	27,863
Mills, Sugar Grinding.....	G. I. Rice.....	29,616
Mills, Wind.....	E. F. Edwards.....	26,899
Mills, Wind.....	E. F. M. Fletcher.....	27,951
Mills, Wind.....	E. W. Mills.....	28,100
Mills, Wind.....	W. I. Tustin.....	28,423
Mills, Wind.....	W. Peck.....	28,770
Mills, Wind.....	A. De Witt.....	29,034
Mills, Wind.....	H. Glover.....	29,074
Mills, Wind.....	J. K. Babcock.....	30,038
Mill Bushes.....	J. G. Shafer.....	29,013
Mill Bushes.....	E. Casner.....	30,296
Mill Race, Floating Sluices for.....	M. A. Shepard.....	28,204
Mill Stones, Balancing.....	D. Fellenbaum.....	29,869
Mill Stones, Bush.....	M. French.....	27,709
Mill Stones, Cementing.....	S. Hoyt.....	28,083
Mill Stones, cooling and grain cleaning when fed to the mill.	W. H. Aikins and D. Babcock.....	28,643
Mill Stones, Curb for.....	O. L. Richardson.....	29,617
Mill Stones, Dress.....	J. W. Gaines.....	28,850
Mill Stones, Dress for.....	C. V. Littlepage.....	27,551
Mill Stones, Dress for.....	J. Broughton.....	28,344
Mill Stones, Dressing.....	I. Yorbrough.....	26,943
Mill Stones, Dressing.....	J. Bowman.....	28,553
Mill Stones, Dressing.....	C. D. Brewer.....	29,857
Mill Stones, Dressing, grinding diamonds for.....	B. D. Tripp.....	30,995
Mill Stones, Dressing Machines for.....	G. Z. Hockenburg.....	29,275
Mill Stones, Dressing Machines for.....	M. Shirk.....	29,345
Mill Stones, Dressing Machines for.....	M. H. Bacon.....	29,350
Mill Stones, Dressing Machines for.....	S. K. Lands.....	29,701
Mill Stones, Hanging.....	J. H. Glover.....	28,362
Mill Stones, Hanging.....	G. P. Dance.....	28,534
Mill Stones, Hanging.....	Z. McDaniel.....	30,025
Mill Stones, Levelling.....	D. A. Balmer.....	31,454
Mill Stones, Picking.....	E. M. Daniels.....	26,857
Mill Stones, Picking, Machines for.....	J. Kelly.....	29,748

Invention or Discovery.	Name of Patentee.	Number.
Mill Stones, Ventilating.....	G. P. Plant and J. Raith.....	30,498
Mirrors, Composition for Silvering	H. Poissonnier	28,773
Mirrors, or looking glasses.....	S. F. Brooks	27,965
Moles, Adjustable, for mole ploughs	L. Kazer.....	29,601
Mole for drain ploughs	A. B. Hawkins and J. Puntenny.....	28,667
Mop Heads	J. Doty, Jr.....	29,148
Mop and Scrubber combined	R. Price.....	27,383
Mop Wringers	O. Choate.....	28,257
Mortising or boring machines, Feed motion for	J. M. Kendall	27,134
Mortising Machines.....	F. H. Harwood.....	26,986
Mortising Machines.....	W. Nangel.....	27,145
Mortising Machines.....	A. C. Vaughn	27,397
Mortising Machines.....	L. Eames	27,895
Mortising Machines.....	E. Coffin	29,141
Mortising Machines.....	H. C. Smith.....	29,920
Mortising Tools.....	T. Board and C. N. Austin.....	26,745
Mortising Tools.....	L. Eames	27,782
Mosaics, Wooden, Manufacture of.....	L. De Forrest.....	26,898
Motion, Converting	L. Planer.....	28,403
Motion, converting reciprocating into rotary.....	C. B. Parsons.....	27,307
Motion, converting reciprocating into rotary.....	J. Hathaway	27,715
Motion, converting reciprocating into rotary.....	E. Matteson	29,802
Motion, converting rotary into reciprocating rectilinear.....	W. H. Lazelle.....	27,057
Motion, Machinery for Changing.....	C. L. Pyron and R. Bruce.....	26,709
Motion of Picker Staff	E. H. Graham	30,441
Motion, stopping and changing.....	F. A. Pratt	29,939
Motion, transmitting to machinery.....	W. Phelps	29,000
Motive Powers	L. D. Towsley and E. Matteson	29,329
Motive Powers, adaptation of substances as.....	F. M. Ruschhaupt	27,569
Motive Powers, engines for obtaining, from steam, aeri-form, or gaseous fluids under pressure.	J. W. Durham.....	29,149
Motive Powers, obtaining	J. Pringle	29,303
Motors, Hydraulic.....	W. Kennish	28,282
Moulded Articles, Elastic	Du Bois Parmelee	26,861
Moulding Machines	E. M. Smith.....	27,261
Moulding Machines, adjusting the planes in.....	W. D. Jones	27,986
Moulding Machines, Brick	J. J. Hutchinson and J. D. Brandberg.....	30,406
Moulding parched corn balls, Machines for.....	R. Arnold	30,661
Mouldings	J. Dougherty	28,260
Mouldings, Cutting.....	C. B. Rogers	26,787
Mouldings, Enamelling.....	R. Ten Eyck, Jr	28,022
Mouldings, Enamelling.....	G. Boss	30,954
Mouldings for hanging pictures.....	H. Hochstrasser	28,174
Mouldings, Machines for Cutting.....	J. B. Winslow.....	28,527
Moulds, Brick.....	J. A. Hamer.....	26,736
Moulds, Brick.....	J. F. Schuffenecker.....	27,652
Moulds, Brick.....	M. Elder	29,958
Moulds for Casting.....	S. A. Corser.....	29,123
Moulds for Casting, Blackwashing	W. and D. Ferguson.....	27,438
Moulds for casting needle threaders.....	S. S. Burlingame	29,230
Moulds, Facing, for casting metals.....	J. B. Hyde	28,379
Moulds, Glass.....	C. H. Warren.....	27,873
Moulds, Glass.....	G. W. Scollay	30,093
Moulds for glass goblets, &c.....	A. J. Sweeney.....	29,017
Moulds for glass jars	R. Hemingray	30,063
Moulds for glass lamps	J. Jenkins.....	30,066
Moulds for jars	G. Scott.....	28,611
Moulds for metal dies used by dentists	F. Y. Clark.....	28,348
Moulds for moulding cement pipes.....	H. Knight	28,184
Moulds for rifle balls	L. Evans.....	30,054
Movements, Mechanical	J. H. Wait	28,318
Mowing Machines	O. R. Chaplin	26,814
Mowing Machines	S. Ray and M. R. Shalters	27,869
Mowing Machines	A. M. George.....	28,072
Mowing Machines	C. Bullock	28,628
Mowing Machines	A. B. Allen	29,228
Mowing Machines	J. W. Shipman	29,325
Mowing Machines	F. Gardiner.....	29,371
Mowing Machines	F. W. Warner.....	29,425
Mowing Machines	H. Marcellus	29,895
Mowing Machines	J. G. Dunham	30,961
Mowing Machines, hand	J. M. Spencer.....	29,922
Mowing and Reaping Machines	R. Ketchum	28,283
Mowing and Reaping Machines	V. M. Chafee.....	27,523
Musical Instruments	U. Hill and H. J. Newton	27,288
Musical Instruments	A. White.....	28,224
Musical Instruments, keyed, automatic attachment to.....	E. D. Bootinan	30,955
Musical Instruments, Reed.....	G. Woods	28,230
Musical Reeds.....	J. C. Briggs.....	28,060
Musquito Bars.....	T. S. Scoville.....	27,236
Musquito Nets and Shades for windows.....	R. B. Burchell.....	27,103

Invention or Discovery.	Name of Patentee.	Number.
N.		
Nail Heads for pictures	J. B. Sargent	29,720
Nail Holes, Machines for punching	C. C. Crosby	30,374
Nail Plate Feeders	J. W. Hoard and T. A. Searle	27,289
Nail Plate Feeders	W. Riley, Jr.	29,613
Nails, Cut, Machines for	J. Berry	27,096
Nails, cutting, Machines for	W. Wickersham	28,928
Nails, Galvanized, cleansing and separating	W. Blake	29,664
Nails, Horse Shoe, Machines for	W. Tallman	27,656
Nails, Horse Shoe, making	A. Whittemore	29,643
Needle Cases	T. G. Harold	28,037
Needle Guards	J. C. Howell	27,805
Needle Holders of Sewing Machines	G. H. Horn	27,409
Needles, making	F. Plant	28,772
Needles, Sewing	H. Essex	31,000
Needles, Sewing Machine	F. H. Drake	29,648
Needles, Sewing Machine, threading	J. Stevens	27,762
Newspapers, &c., directing	J. Battey	26,827
Newspapers, printing Addresses on	J. A. Campbell	26,831
Newspapers, printing Addresses on	D. B. Tiffany and S. W. Sole	27,580
Newspapers, printing Addresses on	N. Bowlies	28,059
Newspapers, &c., printing Addresses on, Apparatus for	S. Soule	30,259
Nippers and Scissors	H. D. Walcott	27,501
Nozzles for fire engines	J. C. Howells	28,865
Nozzles for hose pipes	N. Holtz	26,994
Nut Crackers	L. A. Clark	26,885
Nut Crackers	S. J. Smith	28,311
Nuts on railroad bolts	G. W. R. Bayley	29,235
Nuts and Screws, anti-friction	C. F. Spencer	28,613
O.		
Odometers	J. W. Whitney	27,589
Odometers	A. T. Howard	28,985
Odometers	L. W. Nicholls	30,640
Oils, Apparatus for trying	J. M. Hunter	30,575
Oils, Coal, Apparatus for condensing	J. F. Bennett	28,341
Oils, Coal, Apparatus for distilling	F. W. Williard	27,327
Oils, Coal, Apparatus for distilling	C. J. Van Wyck	27,603
Oils, Coal, distillation of	L. Atwood	27,768
Oils, Coal, distillation of	D. S. Stombs and J. Brace	27,842
Oils, Coal, distillation of	B. Garvey	29,218
Oils, Coal, distilling	H. W. Adams	28,446
Oils, Coal, manufacture of	L. Atwood	28,448
Oils, Coal, redistillation of	L. Atwood	28,246
Oils from Cotton Seeds, manufacture of	G. G. Henry	26,845
Oils, Feeders of	J. Turner	29,446
Oils, Fish	W. D. Hall	29,164
Oils, hydro-carbon, distillation of	L. Atwood	27,767
Oils from Resin, distillation of	S. Frazer	28,663
Oils, siccative, manufacture of	J. Roux	26,929
Ordnance	T. J. Mayall	30,742
Ordnance, Breech-loading	W. W. Hubbell	28,486
Ordnance, Breech-loading	L. Evans	30,305
Ordnance, Breech-loading	T. J. Mayall	30,335
Ordnance, Repeating	J. H. Matthews	29,437
Ores and Coal, desulphurizing	W. H. Letterman	28,875
Ores, deoxydizing	I. Rogers	29,746
Ores of Gold, Silver, and Copper, process of treating	J. McCulloch	28,882
Ores, heating, Apparatus for	A. C. Vandyke	28,025
Ores, Mineral, Machines for crushing	W. P. Parrott	28,499
Ores, Separators of	E. L. Seymour	29,198
Ores, Separators of	S. Man	29,438
Ores, Separators of	W. O. Bourne	30,290
Ores, Washers of	G. E. Mills	27,463
Ores, Washers of	B. O'Bryan	30,086
Ores of Zinc, Lead, Iron, Cobalt, and Nickel, metal- lurgic application to certain	R. George	27,710
Orthography, teaching, &c	H. B. Brown	27,201
Ovens	D. McKensie	28,130
Ovens	J. M. Read	29,818
Ox Shoes	A. Van Valkenburgh	28,218
P.		
Padlocks	W. Bohannon	27,883
Padlocks	F. Roos and F. Spoehr	29,406
Padlocks	J. North	31,003
Pads, Medicated	W. D. Titus	26,719
Pails, Milk, straining	H. Buckins	30,046
Painting Bottoms of Vessels, &c., Compositions for	J. G. Fuller	27,331
Paints, Composition for	E. P. Emerson	27,280

Invention or Discovery.	Name of Patentee.	Number.
Paints, Composition for mixing with	U. Lee.....	26,685
Paints, Machines for mixing	C. W. Brown and G. W. Banker	28,324
Paints, mixing.....	S. P. Cheever.....	28,560
Pans, Evaporating	H. O. Ames	30,443
Pans, square, of sheet metal, manufacture of.....	E. M. Roxford	30,545
Pantaloons	W. Franklin	26,842
Paper Bags, Machines for	H. G. Armstrong	30,191
Paper Files.....	E. Clark.....	28,234
Paper Files.....	A. Liebenroth	28,438
Paper Files, Portfolio	J. N. Jacobs	28,755
Paper, folding, for bookbinders.....	G. K. Snow	27,166
Paper Folding Machines	C. Chambers, Jr.....	30,719
Paper Folding Machines	J. S. Gallaher, Jr.....	30,853
Paper Folding Machines	C. Chambers, Jr.....	30,910
Paper Folding and Pasting Machines	G. K. Snow	27,392
Paper and Letter Files.....	J. B. McEnally	27,302
Paper, Preparation of	J. L. Jullion.....	28,182
Paper Pulp, Manufacture of	E. Clemo.....	29,059
Paper Pulp, Manufacture of	F. De Campoloro	29,471
Paper Safety	M. A. Howell, Jr	28,370
Paper Trimming	J. Knoch.....	29,891
Paper Wetting, Machines for.....	A. Overend.....	28,895
Parasols.....	A. G. Davis and H. S. Frost.....	30,127
Parasols and Fans.....	J. T. Eichberg.....	30,213
Parchment, Vegetable, Manufacture of.....	X. Karcheski.....	30,946
Paste for attaching coverings to piano forte hammers..	J. Munson	28,768
Pastry Board	L. E. Higby.....	26,989
Patterns, Waving, Machines for making	A. Moffet.....	29,901
Pavements, &c., Composition for.....	G. Scrimshaw	29,722
Pavements, mode of making.....	S. D. Tillman	27,658
Paving Rammers for Streets.....	W. Beach.....	30,042
Pawl and Ratchet	E. P. Russell	29,310
Peach Parers	M. Smith.....	28,310
Peach Parers	W. A. Coe	30,527
Pegging Boots and Shoes, Machines for.....	W. N. Hawley	26,987
Pegging Jacks	E. Everson	29,257
Pegging Jacks	E. L. Harlow.....	29,434
Pegging Machines	E. Townsend.....	27,085
Pegging Machines	J. J. Greenough.....	28,852
Pegging Machines	P. Wells	30,950
Peg Machines, Shoe	C. A. Priest	29,519
Pegs, Shoe, Pointing, Machines for.	S. G. Brett	29,565
Pendulum, Compensating.....	G. Buchanan.....	30,798
Pens, Cleaners for	J. Warren.....	30,270
Pens, Fountain	E. Mathers.....	30,828
Pens, Fountain	G. W. Woolley	30,851
Pens, Fountain	S. A. Skinner	30,935
Pens, Gold, Rolling.....	A. Morton.....	29,809
Pens, Holders for	A. F. Warren.....	28,797
Pens, Holders for	J. Warren.....	29,426
Pens, Ink Reservoir for	R. B. Fitts	28,235
Pens, Racks for.....	J. Young.....	26,727
Pens, Stands for.....	C. J. Rooney and D. Renshaw	27,739
Pen Rack, Cleaner, and Pencil Sharpener.....	H. C. Haskell	27,287
Pens and Pencils, Cases for	J. Richardson	27,311
Pens and Pencils, Cases for.....	J. Bockburn.....	27,777
Pens and Pencils, Cases for.....	G. E. Frew.....	28,664
Pens and Pencils, Cases for.....	G. E. Frew.....	29,432
Pessaries	F. F. Wells.....	27,491
Pessaries	J. M. Heard	28,480
Pessaries, Elastic	I. A. Wadsworth.....	26,941
Photographic Baths.....	W. and W. H. Lewis.....	28,876
Photographic Medals.....	D. F. Maltby	29,652
Photographic Paper, box for silvering and albuminizing.	E. C. Thompson and J. M. B. Wheaton...	29,418
Photographic Plate Shield.....	W. Campbell.....	27,269
Photographs, Solution for toning.....	J. C. Rutherford.....	27,076
Piano Fortes	S. B. Driggs	27,435
Piano Fortes	J. A. Gray.....	28,137
Piano Fortes	J. U. Fischer.....	29,068
Piano Fortes	G. H. Hulskamp.....	29,081
Piano Fortes	H. Lindeman.....	29,502
Piano Fortes	F. Mathushek	30,279
Piano Fortes, Grand.....	F. C. Lighte.....	27,226
Piano Fortes, Keys for.....	H. W. Hindsley.....	27,050
Piano Forte Action.....	I. Kohull.....	26,909
Piano Forte Action.....	W. Compton	28,352
Piano Forte Action.....	G. H. Hulskamp	28,374
Piano Forte Action.....	F. W. Niehaus.....	28,997
Piano Forte Hammers, Paste for attaching coverings to.	J. Munson	28,768
Pianos, Bridges for	W. Compton	29,061
Pianos, Tuning.....	J. B. Norris	28,998
Picks	J. C. Reed.....	28,638
Picture Frames, &c., Enameling Tools for.....	J. Sperry.....	29,122

Invention or Discovery.	Name of Patentee.	Number.
Picture Frames, &c., Enamelling	R. Marcher.....	29,609
Pictures on Glass, Backing up.....	T. Fry	25,733
Pictures, Transparent, Preparation of.....	G. Wedekind.....	30,649
Pie Crimpers	C. A. Shaw.....	30,592
Pigs, Apparatus for singeing.....	A. and E. M. Denny	30,467
Piles, Driving, by atmospheric pressure.....	W. S. Smith	29,921
Pins, Diaper.....	H. S. Leshner	30,232
Pins, Fastening.....	D. Brown	27,519
Pins, Iron Coated, making.....	De G. and T. Fowler	26,874
Pins, Manufacture of	T. and De G. Fowler	29,431
Pins, Scarf	W. Sherburne.....	27,479
Pipes, Casting	A. Brady.....	30,044
Pipes, Construction and Joining of.....	T. S. Truss.....	29,731
Pipes, Exhaust. Locomotive Engines.....	G. W. Lathrop	30,976
Pipes, Gas.....	W. Stephenson.....	29,111
Pipes, Gas and Water, Tapping	J. J. Watson	30,901
Pipes, Hawse.....	T. J. Southard.....	27,482
Pipes, Hawse.....	C. Perley.....	30,755
Pipes, Iron, Galvanized, Cleansing.....	W. Blake.....	27,663
Pipes, Iron, Moulding.....	W. Doyle.....	28,261
Pipes, Machine, Clay	S. Ustick.....	27,602
Pipes, Metal, Moulding.....	H. Parmelee.....	29,908
Pipes, Organ	J. Gorham.....	27,443
Pipes, Sheet Metal, Making.....	E. T. Boardman.....	28,147
Pipes, Stove.....	L. Bissell	30,952
Pipes, Stove, Machines for forming.....	J. Rogers.....	29,405
Pipes, Variable Exhaust for Steam Engines	G. Edwards	27,020
Pipes, Water, Attaching to Buildings	W. Austin	28,954
Pipes, Water, Tapping.....	J. Drake	30,051
Pistons, Lubricating	B. Garvey.....	29,216
Pistons for Steam Engines	H. D. Dunbar.....	29,576
Pistons for Steam Engines	J. K. Robinson and J. M. Clark.....	29,621
Pistons for Steam Engines	T. S. La France.....	30,328
Pistons for Steam Engines	J. K. Robinson and J. M. Clark.....	30,351
Pitchers, Beer.....	L. Hermance.....	27,904
Pitchers, Beer.....	O. Z. Pelton.....	28,771
Pitchers, Ice	N. F. Griswolds	28,076
Pitchers, Spout and Lid of.....	D. Baker.....	28,726
Planers, Rotary, Arrangements of parts in.....	A. J. Kramer.....	30,903
Planes, Bench.....	H. C. Hunt.....	27,983
Planes, Edge, for Boots and Shoes.....	E. S. Smell	27,840
Planes, Moulding.....	C. Fleming.....	29,962
Plane Iron Sharpeners	J. Turner	28,946
Planing Machines.....	S. S. Gray.....	26,902
Planing Machines.....	W. N. Manning	29,089
Planing Machines.....	B. Fitts	29,369
Planing Machines.....	H. D. Stover	29,728
Planing Machines.....	H. D. Stover	29,923
Planing Machines, Rotary Cutter-head for.....	T. Christian.....	29,768
Planing Mouldings, Machines for.....	W. Rankin.....	29,992
Planing, Rotary Cutter-heads for.....	H. D. Stover	29,633
Planing Warped Surfaces, Machines for	J. Green.....	28,808
Planing Wood, Machines for.....	H. D. Stover	30,993
Planting Cotton Seeds	W. Price.....	28,602
Planters, Corn.....	A. Anable.....	26,642
Planters, Corn.....	J. Gross.....	26,670
Planters, Corn.....	D. Nichols	26,700
Planters, Corn.....	J. I. Knight.....	26,819
Planters, Corn.....	W. M. Garee.....	27,358
Planters, Corn.....	G. W. N. Yost	27,764
Planters, Corn.....	M. A. Howell, Jr.....	27,807
Planters, Corn.....	W. C. Banks.....	28,051
Planters, Corn.....	W. C. Banks.....	28,052
Planters, Corn.....	A. Seaman.....	28,106
Planters, Corn.....	J. H. Bonham.....	28,343
Planters, Corn.....	A. Hayes and J. Vancuren.....	28,367
Planters, Corn.....	J. Lee	28,383
Planters, Corn.....	B. T. Stowell	28,418
Planters, Corn.....	J. Johnson	28,490
Planters, Corn.....	J. C. Moore	28,498
Planters, Corn.....	D. Moyer.....	28,595
Planters, Corn.....	P. Stover	28,615
Planters, Corn.....	D. C. Myers.....	28,684
Planters, Corn.....	D. Dutcher.....	28,847
Planters, Corn.....	T. S. Mills.....	28,886
Planters, Corn.....	L. Morris	28,891
Planters, Corn.....	R. Taylor and R. Sprague.....	28,917
Planters, Corn.....	J. L. Smith	28,943
Planters, Corn.....	S. Avery	29,046
Planters, Corn.....	J. Price	29,100
Planters, Corn.....	C. Smith.....	29,412
Planters, Corn.....	F. A. Goddard.....	29,433
Planters, Corn.....	J. S. Fowler.....	29,578

Invention or Discovery.	Name of Patentee.	Number.
Planters, Corn.....	A. Miller.....	29,653
Planters, Corn.....	C. L. Waffle.....	29,734
Planters, Corn.....	F. G. and E. A. Floyd.....	29,777
Planters, Corn.....	D. and H. Wolf.....	29,839
Planters, Corn.....	L. F. Straight.....	30,008
Planters, Corn.....	W. G. Savage.....	30,158
Planters, Corn.....	J. Underwood.....	30,169
Planters, Corn.....	D. J. and J. F. Herr.....	30,316
Planters, Corn.....	J. W. Harbin.....	30,445
Planters, Corn.....	W. H. Adle, P. D. Miles, and G. Custer.....	30,708
Planters, Corn.....	B. Bower.....	30,713
Planters, Corn.....	W. R. Center.....	30,799
Planters, Corn.....	J. H. Rankin.....	30,836
Planters, Corn.....	S. W. Adams.....	30,861
Planters, Corn.....	A. S. and D. Markham.....	30,883
Planters, Corn.....	S. Mowry and E. Deppen.....	30,885
Planters, Corn, Hand.....	H. B. Hammon.....	27,365
Planters, Cotton Seed.....	L. Acree.....	27,091
Planters, Cotton Seed.....	A. Carey.....	27,107
Planters, Cotton Seed.....	C. Battle.....	27,421
Planters, Cotton Seed.....	S. P. Sweeny.....	27,748
Planters, Cotton Seed.....	N. E. Badgley.....	28,049
Planters, Cotton Seed.....	B. Owen.....	28,896
Planters, Cotton Seed.....	W. A. and J. F. Suddith.....	28,913
Planters, Cotton Seed.....	Z. Doolittle.....	29,065
Planters, Cotton Seed.....	O. L. Gibson.....	29,964
Planters, Cotton Seed.....	J. T. Ham.....	30,313
Planters, Cotton Seed.....	C. W. McClanahan.....	30,743
Planters, Cotton Seed.....	C. A. Rose.....	30,839
Planters, Cotton Seed.....	R. C. Nash.....	30,981
Planters, Hand, Seed.....	F. Van Doren.....	27,172
Planters, Potato.....	G. W. and J. J. Kersey.....	30,144
Planters, Seed.....	J. S. Huggins.....	27,291
Planters, Seed.....	N. R. Carrington.....	27,350
Planters, Seed.....	T. B. McConaughy.....	27,644
Planters, Seed.....	J. Robinson.....	27,929
Planters, Seed.....	W. C. Pitts.....	28,301
Planters, Seed.....	E. Russell.....	28,330
Planters, Seed.....	J. W. Masten.....	28,325
Planters, Seed.....	H. C. Fairchild.....	28,567
Planters, Seed.....	J. Green.....	28,572
Planters, Seed.....	A. J. Rogers.....	28,777
Planters, Seed.....	H. Sloan.....	28,909
Planters, Seed.....	D. Warren.....	28,926
Planters, Seed.....	E. Young.....	28,936
Planters, Seed.....	G. Hetrick.....	29,078
Planters, Seed.....	G. T. Bennett.....	29,134
Planters, Seed.....	J. P. Allen.....	29,555
Planters, Seed.....	W. L. Gelby.....	29,581
Planters, Seed.....	W. F. Schroeder.....	29,624
Planters, Seed.....	J. F. Tannehill.....	29,636
Planters, Seed.....	T. M. Green.....	29,689
Planters, Seed.....	L. Hariman.....	29,691
Planters, Seed.....	M. Warner.....	29,735
Planters, Seed.....	J. McLaughlin.....	29,803
Planters, Seed.....	J. R. Mills.....	29,807
Planters, Seed.....	W. H. Barber.....	29,853
Planters, Seed.....	W. W. Golsan.....	29,878
Planters, Seed.....	A. F. Hines.....	29,937
Planters, Seed.....	W. G. Pollock and J. W. Sener.....	30,348
(See also Seeding Machines.)		
Plants, Fibrous, treatment of.....	S. M. Allen.....	27,507
Plastic Compounds.....	F. Baschnagel.....	27,340
Plotting Instruments.....	S. Barnet.....	29,133
Ploughs.....	H. F. Cromwell.....	26,655
Ploughs.....	I. V. Taylor.....	26,718
Ploughs.....	J. Lane.....	26,771
Ploughs.....	V. M. Chafee.....	26,833
Ploughs.....	J. L. Dutton.....	26,976
Ploughs.....	R. H. Brooks.....	27,099
Ploughs.....	E. B. Clark.....	27,109
Ploughs.....	W. H. Johnson.....	27,188
Ploughs.....	S. O. Vaughn.....	27,322
Ploughs.....	W. Watson.....	27,490
Ploughs.....	B. Davis and J. M. Scroggin.....	27,619
Ploughs.....	G. W. Hunt.....	27,634
Ploughs.....	W. R. Saunders.....	27,651
Ploughs.....	D. H. and E. E. Smith.....	27,745
Ploughs.....	A. Hammond.....	27,796
Ploughs.....	W. D. Ivery.....	27,808
Ploughs.....	M. C. McCullers.....	28,000
Ploughs.....	I. H. Gooch.....	28,169
Ploughs.....	J. S. Willson.....	28,227

Invention or Discovery.	Name of Patentee.	Number.
Ploughs	D. Wood and A. Byington	28, 323
Ploughs	W. C. Pitts.....	28, 329
Ploughs	J. S. Huggins.....	28, 372
Ploughs	I. N. Rankin	28, 407
Ploughs	M. G. Rhodes and J. M. Skaggs	28, 408
Ploughs	C. I. Shiver	28, 416
Ploughs	W. Price.....	28, 601
Ploughs	C. F. Richter.....	28, 605
Ploughs	H. A. G. Pomeroy and R. F. Hudson.....	28, 637
Ploughs	T. R. Markillie	28, 759
Ploughs	J. M. Cobb	28, 836
Ploughs	J. W. Shipp and C. W. Creushaw.....	28, 907
Ploughs	J. T. Thompson	28, 919
Ploughs	R. S. Williams	28, 930
Ploughs	W. Griffin.....	28, 981
Ploughs	H. H. Robertson.....	29, 104
Ploughs	E. B. Clark.....	29, 139
Ploughs	L. Green	29, 162
Ploughs	M. C. McCullers.....	29, 184
Ploughs	J. P. Bond.....	29, 564
Ploughs	L. D. Burch	29, 567
Ploughs	S. Canterbury.....	29, 569
Ploughs	J. S. Hall.....	29, 590
Ploughs	J. S. Hall.....	29, 591
Ploughs	J. Smith.....	29, 629
Ploughs	P. H. Starke.....	29, 725
Ploughs	B. Woodcock.....	29, 741
Ploughs	A. Roden.....	29, 823
Ploughs	W. E. Wormell.....	29, 841
Ploughs	J. Hardey.....	29, 843
Ploughs	T. E. C. Brinley	29, 858
Ploughs	G. W. Cunningham.....	30, 125
Ploughs	E. J. Frazer.....	30, 136
Ploughs	W. Warren.....	30, 170
Ploughs	W. T. Zollickoffer.....	30, 188
Ploughs	J. A. Stewart.....	30, 263
Ploughs	M. G. Slemmons.....	30, 357
Ploughs	A. Benkelmann.....	30, 712
Ploughs	T. R. Cornick.....	30, 723
Ploughs	S. Fisher.....	30, 727
Ploughs	T. S. and J. A. Lockhart.....	30, 740
Ploughs	R. G. Matheny and L. R. Barnes	30, 741
Ploughs	J. P. Pettit	30, 755
Ploughs	A. W. L. Rivers.....	30, 762
Ploughs	E. Bass.....	30, 793
Ploughs	J. G. Robinson.....	30, 837
Ploughs	S. Whitley	30, 849
Ploughs	H. H. Baker.....	30, 863
Ploughs	O. Spark s.....	30, 892
Ploughs, bending Mould Boards for	W. W. Skinner.....	27, 078
Ploughs, Clevis for	C. Adams.....	28, 337
Ploughs, Clevis for	J. S. Hall.....	30, 813
Ploughs, Cotton.....	W. W. Graves.....	30, 729
Ploughs, Cotton Thinning.....	L. B. Joyner.....	27, 987
Ploughs, Cultivating	A. Hughes.....	28, 487
Ploughs, Ditching.....	J. Brooks.....	29, 357
Ploughs, Ditching, Capstans for.....	E. Forbis... ..	29, 258
Ploughs, Drain	J. Hanon, Jr.....	27, 630
Ploughs, Gang	J. C. Wilson.....	29, 027
Ploughs, Gang	T. S. Heptinstall.....	29, 169
Ploughs, Gang	J. Haege	30, 967
Ploughs, Hill Side	G. C. Miller and R. Henry.....	29, 708
Ploughs, Hill Side	R. H. Ewing.....	30, 726
Ploughs, making Mould Boards for.....	H. H. Seoville.....	28, 507
Ploughs, Mole	E. Parish and W. Parish, Jr.....	27, 233
Ploughs, Mole	S. Adams.....	27, 283
Ploughs, Mole	G. L. Griffin and J. H. Carper	27, 285
Ploughs, Mole	J. Adair	27, 606
Ploughs, Mole	A. L. O. Wall, G. Roberts, and M. S. Carter.....	27, 751
Ploughs, Mole	C. W. Stafford.....	29, 201
Ploughs, Mole	A. M. Karr.....	29, 285
Ploughs, Mole	W. B. Atkinson	30, 036
Ploughs, Mole	H. Bayley	30, 041
Ploughs, Mole	J. H. Edward.....	30, 625
Ploughs, Mole	O. Sturdevant... ..	30, 659
Ploughs, Mole, Portable Capstans for	A. Little and others.....	30, 015
Ploughs, Mole, Trucks for.....	A. L. O. Wall, G. Roberts, and M. S. Carter.....	27, 604
Ploughs, Plates for, from molten Steel, Making.....	F. T. Smith	30, 691
Ploughs, Securing Points to	H. D. Rogers.....	30, 352
Ploughs, Seeding	C. Atkinson	27, 766
Ploughs, Seeding	J. Peeler.....	28, 009

Invention or Discovery.	Name of Patentee.	Number.
Ploughs, Shovel.....	J. T. Cameron.....	27,347
Ploughs, Spade.....	E. Harris.....	28,368
Ploughs, Steam.....	G. W. Ramsey.....	27,242
Ploughs, Steam.....	A. Bigelow.....	28,732
Ploughs, Steam.....	L. B. Woolfolk.....	28,801
Ploughs, Steam.....	L. B. Woolfolk.....	28,933
Ploughs, Steam.....	T. H. Burrige.....	29,358
Ploughs, Steam.....	W. H. H. Miller.....	30,884
Ploughs, Steam.....	J. Reynolds.....	30,986
Ploughs, Sub-soil.....	E. Gross.....	27,626
Plough Stocks.....	J. A. Byrd.....	28,064
Plugs, Fusible, Metallic, Application of, to Steam Boilers.	I. S. Saunders.....	29,322
Plumb Bob.....	B. F. Chappell.....	30,612
Polish for Furniture.....	A. Sabatier.....	28,779
Polishing Cabinet Work, Machines for.....	J. B. Morris.....	29,293
Posts, Fence, Sockets for.....	J. S. Blood and J. W. Miller.....	28,958
Post holes, &c., Earth borers for.....	A. S. Ballard.....	30,175
Post holes, Diggers for.....	J. Lee.....	28,874
Post holes, Machines for digging.....	A. W. Porter.....	29,518
Post Office Stamps.....	J. Spear.....	27,194
Potatoes, Covering, Machines for.....	H. L. Bennett.....	29,351
Potato Diggers.....	E. Robertson.....	28,197
Potato Diggers.....	J. Bawden.....	28,232
Potato Diggers.....	D. Niven.....	28,294
Potato Diggers.....	C. Dunham.....	28,356
Potato Diggers.....	D. De Garmo.....	29,252
Potato Diggers.....	G. C. Bartlett.....	29,339
Potato Diggers.....	J. P. Scudder.....	30,253
Potato Parers.....	C. Digeton.....	28,973
Presses.....	G. W. Penniston.....	26,706
Presses.....	T. H. McCray.....	26,857
Presses.....	E. C. Betts.....	27,198
Presses.....	A. Roden.....	29,719
Presses.....	L. W. Harris.....	29,783
Presses.....	A. Randel.....	30,500
Presses, Anti-friction.....	A. H. Emery.....	29,960
Presses, Apparatus to feed Paper to Printing.....	R. Larter, Jr.....	26,772
Presses, Bookbinders' Standing.....	M. K. Pelletreau.....	30,243
Presses, Brick.....	J. S. Elliott.....	27,117
Presses, Cane.....	E. Powell.....	27,830
Presses, Cheese.....	M. E. Taft.....	27,845
Presses, Copying.....	C. E. Grabo.....	29,585
Presses, Copying.....	C. Chambers, Jr.....	30,204
Presses, Copying.....	E. Clark.....	30,959
Presses, Cotton.....	J. Y. Ham.....	26,764
Presses, Cotton.....	T. H. McCray.....	27,459
Presses, Cotton.....	Y. F. Wright.....	28,124
Presses, Cotton.....	M. M. Jones.....	28,281
Presses, Cotton.....	G. Milliran.....	28,592
Presses, Cotton.....	H. Mason.....	29,290
Presses, Cotton.....	P. B. Wever.....	29,736
Presses, Cotton.....	J. C. Sellers.....	29,827
Presses, Cotton.....	P. G. Gardiner.....	29,874
Presses, Cotton.....	W. T. Opie.....	29,904
Presses, Cotton.....	M. Wappick.....	29,928
Presses, Cotton.....	R. M. Brooks.....	30,200
Presses, Cotton.....	R. Scott, Jr.....	30,356
Presses, Cotton.....	S. Dike.....	30,394
Presses, Cotton.....	P. G. Gardiner.....	30,473
Presses, Cotton.....	M. Murchison.....	30,493
Presses, Cotton and Hay.....	N. Chapman.....	26,750
Presses, Cotton and Hay.....	J. W. Conway.....	27,429
Presses, Cotton and Hay.....	H. F. Hicks.....	29,341
Presses, Drop.....	M. and C. Peck.....	29,910
Presses, Hay.....	W. McCord.....	26,917
Presses, Hay.....	J. H. Gove.....	27,351
Presses, Hay.....	I. S. Arnold.....	28,952
Presses, Hay.....	S. G. Randall.....	29,194
Presses, Hay.....	S. Stevens.....	29,320
Presses, Hay and Cotton.....	D. L. Millir.....	27,556
Presses, Hydraulic.....	C. W. Hippen.....	28,167
Presses, Laundry and Tailors'.....	G. W. Jennings.....	27,131
Presses, Letter Copying.....	G. C. Taft.....	28,020
Presses, Packing.....	J. Y. Parce.....	30,342
Presses, Printing.....	G. P. Goodon.....	26,761
Presses, Printing.....	V. M. Chafee.....	26,834
Presses, Printing.....	O. E. Weston.....	26,869
Presses, Printing.....	J. W. Latcher.....	26,999
Presses, Printing.....	F. L. Bailey.....	27,197
Presses, Printing.....	F. O. Degener.....	27,973
Presses, Printing.....	M. S. Beach.....	28,823
Presses, Printing.....	G. C. Howard.....	28,864

Invention or Discovery.	Name of Patentee.	Number.
Presses, Printing.....	A. B. Taylor.....	28,915
Presses, Printing.....	J. A. Smith and J. Orvis.....	28,948
Presses, Printing.....	G. F. Hebard, G. J. Hill, and S. D. Rockwell.	29,547
Presses, Printing.....	C. Wells and H. Barth.....	29,554
Presses, Printing.....	J. E. Priest.....	29,816
Presses, Printing.....	W. H. Babcock.....	30,452
Presses, Printing, Apron for.....	C. McBurney.....	26,854
Presses, Printing, Feeder for.....	H. Barth.....	30,456
Presses, Printing, Feeding Apparatus for.....	T. Hall.....	29,485
Presses, Power.....	C. Oyston.....	28,401
Presses, Power.....	J. Weed.....	28,429
Presses, Tobacco.....	E. T. Collins.....	27,888
Presses, Tobacco.....	T. N. Read.....	28,410
Presses, Tobacco.....	J. Sweeney.....	28,912
Presses, Wine.....	W. S. Kimball.....	29,889
Pressing Cheese.....	W. McAllister.....	29,899
Pressing Tobacco.....	J. Henry.....	29,279
Printers' Composing Stick.....	S. W. Brown.....	28,436
Printing Machine, Stencil.....	A. J. Fullam.....	30,216
Printing Plates.....	W. H. Oakes.....	30,495
Printing Plates and Relief.....	D. C. Hitchcock and E. B. and E. M. Larchar.	30,630
Printers' Rule, Mitreing.....	O. F. Groves and H. L. Pelouze.....	28,472
Printing Tickets for Railroads.....	G. Bailey.....	27,510
Prisons, Iron.....	E. Jacobs.....	29,282
Projectiles.....	J. W. Cochran.....	30,123
Projectiles for Breech-loading Ordnance.....	W. W. Hubbell.....	28,084
Projectiles for Fire-arms.....	W. W. Hubbell.....	26,904
Projectiles for Fire-arms.....	B. Swain.....	27,245
Projectiles for Fire-arms.....	R. Cranston and H. Bates.....	29,573
Projectiles, Flat, Application of Gunpowder to, giving them Rotation.	E. O. C. Ord.....	27,147
Projectiles for Rifled Ordnance.....	B. B. Hotchkiss.....	29,272
Propellers.....	C. J. Schoeder.....	30,355
Propellers, Application of, to Vessels.....	H. Stanley.....	30,360
Propellers, Applying Steam Power to.....	A. M. Sawyer.....	28,200
Propellers for Canal Boats.....	E. Backus.....	29,660
Propellers, Marine.....	J. Reynolds.....	27,156
Propellers, Marine.....	H. W. Herbert.....	27,629
Propellers, Marine.....	E. Webber.....	28,542
Propellers, Marine.....	D. D. Porter.....	28,688
Propellers, Marine.....	G. L. Carver.....	29,464
Propellers, Marine.....	H. E. Harding.....	29,939
Propellers, Marine.....	H. D. J. Pratt.....	30,757
Propellers, Rocking.....	E. Landis.....	29,288
Prophylactic Remedies.....	C. H. Thomas.....	30,434
Propulsion, Marine.....	L. B. Flanders.....	30,057
Protractors, Compass.....	T. H. West.....	30,187
Prunes, Curing.....	J. Reckhow.....	28,441
Pruning Implements.....	J. Fasig.....	27,437
Provisions, Curing.....	D. E. Somes.....	30,658
Prussian Blue.....	J. Clark.....	28,651
Prussian Blue, Manufacture of.....	T. A. Helwig.....	27,716
Pulley Blocks.....	J. L. Hovey.....	27,633
Pulleys, Facing.....	T. Blume.....	26,810
Pulleys, Gate.....	D. Bedell.....	28,146
Pulleys, Grooved.....	L. Planer.....	26,707
Pulmonometers.....	A. Eckert.....	26,754
Pumps.....	W. Peck.....	26,705
Pumps.....	H. Reichard.....	27,070
Pumps.....	B. Holly.....	27,128
Pumps.....	S. G. Randall.....	27,308
Pumps.....	W. A. Slason.....	27,576
Pumps.....	C. Hood.....	27,905
Pumps.....	H. Belfield.....	27,945
Pumps.....	L. Matthews.....	27,996
Pumps.....	R. Ramsden.....	28,012
Pumps.....	G. Lindsay.....	28,090
Pumps.....	J. E. Atwood.....	28,140
Pumps.....	W. Peck.....	28,193
Pumps.....	W. Race.....	28,405
Pumps.....	J. M. Stephenson.....	28,417
Pumps.....	G. H. Mills.....	28,439
Pumps.....	G. Palmer.....	28,599
Pumps.....	N. S. Bean.....	28,644
Pumps.....	E. Wade.....	28,704
Pumps.....	J. A. C. J. Smith.....	29,110
Pumps.....	B. Holly.....	29,266
Pumps.....	C. Warner.....	29,424
Pumps.....	W. Shearer.....	29,723
Pumps.....	G. C. Selfridge.....	29,918
Pumps.....	H. Pease.....	29,989

Invention or Discovery.	Name of Patentee.	Number.
Pumps	J. Holmes	30,221
Pumps	M. E. Rudasill	30,354
Pumps	S. D. Stout	30,363
Pumps	W. J. Johnson	30,480
Pumps	B. Douglas	30,603
Pumps	J. B. Johnson	30,825
Pumps, Air, for Exhausting and Sealing Cans	W. Y. Gill	29,582
Pumps, Air, for Steam Engines	D. A. Woodbury	28,229
Pumps, Breast, Construction of	J. H. Beadle	29,662
Pumps, Chain	A. Coates	29,466
Pumps, &c., Drawing Water from, and supplying Air to Air Vessels	A. H. Rauch	28,604
Pumps for Locomotive Engines	C. L. Rice	29,195
Pumps, Steam	A. and F. Brown	27,426
Pumps, Steam	J. S. Barden	27,610
Pumps for Steam Engines	J. F. Hamilton	29,271
Punches	A. J. Fullam	27,793
Punches	R. Humphrey	30,405
Punching Machines	J. A. Bradshaw and A. F. Colby	29,231
Punching Machines	O. Hughes	29,343
Q.		
Quadrants, Sinecal	A. M. Chisholm	29,767
Quartz Crushers	H. H. Scoville and D. R. Frazer	27,599
Quartz Crushers	P. Estes	28,662
Quartz Crushers and Amalgamators	F. A. Abbott	30,282
Quartz Crushing	J. C. Dickey	28,163
Quartz Crushing Apparatus	C. Dominguez	28,974
Quartz Crushing Machines	F. N. Du Bois	28,849
Quartz Crushing and Pulverizing	T. A. Morris	30,522
Quartz, Crushing, Stamping Mills for	S. F. Hodge	30,821
Quartz, Machines for Crushing	J. Short	27,932
Quartz, Machines for Stamping Metal	P. W. Gates and D. R. Fraser	28,807
Quartz Mills	J. C. Davis	29,470
Quartz Mills, Attaching the Grinding Surfaces of	E. Coleman	27,695
Quartz Pulverizers and Amalgamators	W. H. and I. Scoville	30,162
Quartz Rock, &c., Machines for Breaking	S. F. Hodge	30,822
Quilting Frames	J. L. Newton	29,811
R.		
Radiators, Heat	D. G. Fletcher	27,950
Radiators, Steam	A. P. Pitkin	28,686
Radiators, Stove	C. P. Crossman and J. B. Brown	30,301
Raft, Life-preserving	Albert Baker	26,825
Raft, Life-saving	S. B. Broad	28,150
Railroads	B. F. Lee	29,978
Railroads, Construction of	A. Hay	29,693
Railroads, Station Indicators for	E. M. and J. E. Woodward	28,932
Railroads, Tracks for City	S. M. Fox	27,978
Railroad Frogs	J. M. Rabb	30,155
Railroad Frogs, Substitute for	S. A. Black and F. C. Ford	30,117
Rails, Fence, Machines for Pointing	C. Yost	29,030
Rails, Iron, for street railroads	S. A. Beers	28,731
Rails, Railroad, Connecting the ends of	H. H. Graham	27,444
Rails, Railroads, Securing to the Cross-ties	S. M. Witmer	30,702
Rails for street railroads	G. Eaton	28,067
Rails and Wheels, Railroad, testing the wear of	C. T. Tiernur	27,915
Rakes, Automatic, for harvesters	J. C. Twining	29,640
Rakes for harvesters	W. P. Penn	28,010
Rakes for harvesters	A. Pritz	30,835
Rakes for harvesters	S. A. Lindsay	30,892
Rakes for Harvesting Machines	L. P. Brady	30,908
Rakes, Hay	C. J. Fay	30,132
Rakes, Hay	S. J. Homan	30,222
Rakes, Horse	R. Lounsberry and F. G. Wilson	27,000
Rakes, Horse	L. Beech	27,771
Rakes, Horse	W. and T. Schnebly	29,105
Rakes, Horse	F. Leidle and S. Eberly	29,012
Rakes, Horse	G. S. Kinsey	29,795
Rakes, Horse	J. C. Stoddard	30,007
Rakes, Horse	D. Strock	30,010
Rakes, Horse	J. Chappel	30,666
Rakes, Horse Hay	A. B. Johnson	27,366
Rakes, Horse Hay	H. Eastman	27,407
Rakes, Horse Hay	A. R. Hurst	29,082
Rakes of Muley Saws, Adjusting	C. W. Griffith	30,214
Rakes for Reaping Machines	J. R. Byler	30,786
Rakes for Reaping Machines	J. R. Byler	30,852
Rakes for Reciprocating Saws, Adjusting	J. J. Watson	30,523
Rakes and Reels Combined for harvesters	McC. Young, Jr.	30,103
Raking Apparatus for harvesters	W. A. Wood	30,018

Invention or Discovery.	Name of Patentee.	Number.
Raking Apparatus, Automatic, for harvesting	W. H. Wilson.....	28,228
Raking Attachment for harvesters	D. Guptail.....	28,854
Raking Attachment for harvesters	C. P. Gronberg.....	29,966
Raking and Binding Apparatus for harvesting.....	A. B. Smith.....	28,783
Raking and Pitching Hay, Machines for.....	A. J. Preston.....	30,423
Raking and Reaping Grain and Mowing Machine for Grass.	A. A. Henderson.....	29,594
Rammers for paving streets.....	W. Beach.....	30,042
Ranges.....	B. W. Dunklee.....	27,436
Ranges, Cooking	F. S. Merritt.....	28,099
Ranges, Cooking	E. G. Niles.....	29,711
Ranges, Cooking and Furnace.....	J. Brown and L. Bridges.....	30,203
Ranges and Stoves.....	J. G. Treadwell.....	30,013
Ratan Machines	L. Hull.....	28,488
Razor Strops.....	T. J. Mayall.....	27,301
Reapers and Mowers	G. A. Stephenson.....	30,262
Reaping Machines.....	W. S. Stetson.....	30,167
Reaping and Mowing Machines	J. Butler.....	27,034
Reaping and Mowing Machines	F. T. Lomont and J. Grojean.....	27,641
Reaping and Mowing Machines	D. Sheets, S. H. Dubois, and J. B. Pressey.....	28,782
Reaping and Mowing Machines	E. M. Smith.....	29,528
Reaping and Mowing Machines	A. A. Henderson.....	29,593
Reaping and Mowing Machines	McC. Young, Jr.....	30,276
Reaping and Mowing Machines Combined.....	T. H. Dodge.....	26,972
Reaping, Raking Grain, and Mowing Machines for Grass.	A. A. Henderson.....	29,594
Reed Instruments, Steam	G. G. Ray.....	29,915
Reef Points of Sails, Securing	J. W. Logan.....	28,589
Reels, Silk or Thread	S. W. and J. F. Palmer.....	28,297
Reflectors for Gas Light.....	J. P. Frink.....	27,898
Reflectors, Night Light.....	J. Wyberd.....	27,855
Refrigerators	J. Yerkes.....	27,255
Refrigerators	W. M. Baker.....	27,681
Refrigerators	J. V. S. Adriance and J. W. Clark.....	26,729
Refrigerators	W. W. Stanard.....	29,415
Refrigerators	D. S. Heffron.....	29,487
Refrigerators	K. Spencer.....	30,164
Refrigerators	T. Byrne.....	30,461
Registering Fares, Machines for.....	M. W. Helton.....	29,274
Registering Indicator for Stations or Streets.....	A. H. Rau.....	27,068
Registers, Car	L. H. French.....	29,778
Registers, Hot Air	F. E. McNeill.....	27,461
Registers, Legislative Voting.....	J. W. Wetmore.....	27,753
Registers, Omnibus, Self-locking Devise for	M. Offley.....	29,549
Registers, Point	J. H. Cliff.....	29,359
Registers, Speed.....	J. D. Billings.....	27,664
Registers, Stove.....	Washburn Race.....	26,782
Registers, Time.....	R. Schone.....	30,841
Regulators for Heating Apparatus.....	E. L. Brown.....	30,716
Regulators for Steam and other Engines	J. A. Burnap.....	30,384
Regulators, Steam and Fire	J. Woodruff.....	27,403
Resin, Manufacture of.....	D. Fehrman.....	27,624
Resin, Manufacture of.....	H. Napier.....	27,646
Retorts, Coal.....	Franklin W. Williard.....	26,739
Retorts, Gas.....	J. Davis and S. Chaddock.....	27,113
Retorts, Gas.....	R. C. Harrington.....	27,543
Retorts, Gas	C. Wooster.....	28,431
Retorts, Gas, Clay.....	J. P. Kennedy.....	27,451
Retorts, Gas, Securing Lids on	J. R. Thomas.....	28,519
Revolvers	E. F. Starr.....	30,843
Revolvers	H. Smith and D. B. Wesson.....	30,990
Rice, Cleaning	J. Van Valkinburgh.....	29,733
Rice, Cleaning	S. Dodson.....	30,131
Rice, Cleaning	S. P. Kase.....	30,682
Rice Hullers	D. Greene.....	30,604
Rice, Hulling and Cleaning	H. N. Black.....	30,653
Rice, Hulling and Finishing, Machines for.....	R. Anderson.....	27,195
Rice, Hulling, Machine for.....	D. Lombard.....	30,489
Rice, Hulling and Polishing	C. B. Horton.....	29,788
Rice, Polishing	D. Lombard.....	29,893
Rice, Scouring	D. Lombard.....	29,894
Rifle Canes.....	A. Crow.....	28,160
Rigging, Ship's, Setting up.....	E. U. Thompson.....	29,204
Rings, &c., Finger, of sheet metal, manufacture of	J. M. Potter.....	30,246
Rings, Martingale.....	D. C. Lockwood.....	30,233
Rivers, Machine to delineate the course of	H. Collier.....	30,528
Rivets and Bolts, Machines for making... ..	A. Reese.....	27,238
Rocks, blasting	J. Gilleland.....	30,809
Roller and Manure Spreader, combined	J. Lyker.....	30,179
Rollers, Anti-friction, for propeller shafts.....	D. S. Chase.....	29,570
Rollers for pressing dough.....	F. J. Rice and G. W. Hayward.....	29,006
Rolling blanks, Machines for	N. C. Lewis.....	29,500
Rolling iron bars, &c.....	B. Lauth.....	29,702

Invention or Discovery.	Name of Patentee.	Number.
Roofing Boards	F. Walcott	27,872
Roofing and Cement, Composition for	A. Asboth	28,953
Roofing, Composition for	J. P. Day	30,217
Roofing Houses, Composition for	J. A. Hawley	28,577
Roofs, Brackets for	A. Jones	30,325
Roofs, Covering Portable	H. Tucker	26,868
Roofs, Slate, laying	J. Mott	27,822
Roots, preserving, Houses for	T. V. Bush	28,558
Rope, laying	George W. Pittman	26,894
Rope-making Machines	C. R. Bellows	26,872
Rope, Wire, making	C. Collins	28,738
Rudders, Attachment of	B. F. Delano	26,971
Rudders, hanging	J. P. Manton and H. A. Billings	27,139
Ruffles, manufacture of	G. B. Arnold	28,244
Ruffles, manufacture of	G. B. Arnold	30,111
Rulers, Book	A. J. Moser	27,464
Rules, perforating, for printers	W. W. Harding	28,078
Ruling Machines	L. R. Dreysel	26,732
S.		
Sabres, Bayonet, fastening	C. A. McEvoy	30,539
Saccharine Juices, Apparatus for evaporating	S. H. Gilman	27,219
Saccharine Juices, Apparatus for clarifying and evaporating	L. P. Harris	28,477
Saccharine Juices, defecating and decolorizing	J. C. Tucker	27,321
Saccharine Juices, evaporating	A. C. Clemens	28,349
Saccharine Juices, evaporating	John Souther	26,794
Saccharine Juices, evaporating	D. B. Neal and H. C. Emery	27,258
Saccharine Juices, Machines for evaporating	W. H. Gilbert and H. O. Ames	28,570
See also Sugar Juices.		
Sack Fasteners	T. Hopkins	29,695
Saddles	W. F. Dean	27,621
Saddles	J. H. Boyd	30,118
Saddles	J. Commins	30,207
Saddles, Harness for	T. J. Weeks	30,650
Saddles, Military	W. H. Jenifer	28,867
Saddles, Riding	J. E. Kelly	27,719
Saddles, Riding	M. Nelson	27,824
Saddle Trees	S. E. Tompkins	30,168
Sad Irons	W. M. Knight	29,796
Sad Irons	L. S. Chichester	29,863
Sad Irons, Heaters for	W. J. Andrews	28,546
Safes	J. B. Cornell	27,527
Safes, Burglar-proof, making	J. R. Floyd	30,398
Safes, Composition for lining	J. Jenkins	28,756
Safes, Fire-proof	G. Menzel	27,997
Safes, rendering, Fire-proof	A. K. Eaton	28,459
Sails, attaching Bonnets to	J. Smith	26,935
Sails, Fore-and-aft, reefing	I. W. Gill	26,758
Sails, Fore-and-aft, reefing	W. Morton	26,857
Sails, Fore-and-aft, reefing	S. G. Martin	26,915
Sails, Fore-and-aft, of vessels	A. C. Tibbetts	30,011
Sails, Grommet	W. W. Wilcox	27,016
Sails, Main, of fore-and-aft vessels	G. W. Geran	28,360
Sails, reefing	A. L. Simpson	27,316
Sails, Ships'	W. A. Sands	30,694
Sails, Ships', working	A. L. Simpson	29,829
Sails to Ships' Yards, attaching	J. Lewis	30,582
Sails, Top Yards, hanging	J. Nute	28,399
Sail Cringles, Attachment for	A. M. Southworth	27,243
Saline Liquors, evaporating, Apparatus for	C. Pope	27,153
Salt, Common, manufacture of	T. Spencer	28,513
Salt, Common, manufacture of	T. Spencer	30,165
Sap Conductors	E. Mosher	26,858
Sap Conductors	H. Hecox	29,884
Sap from trees, Apparatus for collecting	E. W. Ormsbee	29,905
Sash, hanging, of railroad car windows	M. Messer and A. Steinbrenner	29,631
Sash, Metallic	W. E. Worthen	28,030
Sash, Window	W. H. McCoy and J. F. Muth	27,998
Sash, Window, Elevators and Locks for	S. Mills	29,439
Sash, Window, hanging	T. Fry	28,267
Sash, Window, hanging	L. W. Thickstun	30,095
Sash, Window, Spring Rollers for	C. F. Brown	26,830
Sash, Window, supporting	D. C. Lyall	27,816
Sash Fasteners	J. M. Whitney	28,322
Sash Fasteners	R. Johnson	28,491
Sash Fasteners	L. Bartoo	28,729
Sash Fasteners	T. L. Braynard	29,240
Sash Fasteners	P. A. Gladwin	30,218
Sash Fasteners	S. Walker	30,380
Sash Fastenings, Windows	J. Hornig	29,273
Sash Stops to windows, attaching	N. S. McFarlan	28,994
Sash Supports for car windows	H. K. Smith	28,511

Invention or Discovery.	Name of Patentee.	Number.
Sash Supports, Friction	S. G. Crane.....	26,873
Sash Supporters, Window.....	J. Cooper.....	26,653
Sash Supporters, Window.....	D. Bickford.....	27,032
Sash Supporters, Window.....	J. W. Briggs.....	27,947
Sash Supporters, Window.....	L. Y. Gardiner.....	30,357
Sash Supporters, Window.....	J. McMahan.....	30,337
Sausage Fillers	S. R. Atkins and J. R. Hitchcock.....	27,196
Sausage Fillers	A. Shepard.....	28,414
Sausage Fillers	J. G. Perry	28,900
Sausage Fillers	J. G. Perry	29,814
Sausage Machines	J. Bills	27,422
Sausage Machines	J. G. Perry	28,298
Sausages, Machines for filling	J. G. Perry	27,565
Sausage Stuffers	C. Kramer.....	27,722
Sausage Stuffers	J. G. Perry	27,828
Sausage Stuffers	S. K. Plumb.....	27,829
Sausage Stuffers	J. Kinzer.....	29,385
Sawing Boards in required lengths, Machines for.....	T. Drake	28,975
Sawing Machines.....	R. B. Brown.....	26,746
Sawing Machines.....	K. R. Olmsted.....	27,024
Sawing Machines.....	C. Pitts.....	29,003
Sawing Machines.....	D. B. Bartholomew	30,864
Sawing Machines, arrangement of mechanism of.....	J. C. Clive	30,463
Sawing Machines, Cross-Cut.....	A. D. Hoffman.....	27,053
Sawing Machines, Cross-Cut	S. A. Worthen	30,904
Sawing Machines, Cross-Cut, Steam.....	S. M. King	29,384
Sawing Machines, Scroll.....	W. P. Wood	28,800
Sawing Stone, Machines for.....	A. M. Burnham.....	29,667
Saws.....	J. E. Emerson	27,537
Saws.....	P. Crosby	27,779
Saws.....	D. Talbot.....	30,265
Saws, Circular, construction of.....	R. K. Hawley.....	27,628
Saws, Circular, grinding	J. Andrews.....	30,190
Saws, Circular, hanging.....	D. Eldridge.....	30,672
Saws, cutting, Die Plate for	E. P. Gleason.....	28,747
Saws, Filers for	J. S. Tripp	27,937
Saws, filing	P. Crosby.....	26,838
Saws, filing	P. McMahon	28,094
Saws, Gin, filing.....	S. Yeatman	30,442
Saws, grinding	H. R. Burger	29,950
Saws, grinding, Machine for.....	W. Dougherty	28,742
Saws, grinding, Machine for.....	W. Dougherty	30,130
Saws, grinding, Machine for.....	J. D. Custer	30,209
Saws, grinding and polishing	C. W. Hubbard.....	27,221
Saws, Handles to, fastening.....	J. Neimeyer	27,303
Saws, Reciprocating, hanging.....	Leo. Anderson.....	26,823
Saws, Muley, adjusting Rakes of.....	C. W. Griffith	30,214
Saws, Reciprocating	C. Germann	29,688
Saws, Reciprocating, adjusting Rakes of.....	J. J. Watson.....	30,523
Saws, Reciprocating, hanging	C. Weston	28,223
Saws, Scroll, Device for straining	C. Rose	29,009
Saws, tempering.....	W. Clemson.....	29,671
Saws, Wood	A. Pruyn	29,991
Saw Blades, Buck, Device for contraction or expansion of.....	A. Pruyn.....	27,240
Saw Blades, grinding	H. Disston.....	29,680
Saw Frames, Wood	W. H. Livingston.....	30,073
Saw Frames, Wood	W. H. Livingston.....	30,076
Saw Logs, rossing	C. H. Stearns	27,081
Saw Sets	A. L. Carrier	28,252
Saw Sets	W. Clemson.....	29,670
Scabbards, attaching, to belts.....	Wm. Lewis	26,949
Scabbards, Bayonet, Frogs for.....	W. Hoffman.....	28,175
Scabbards, Bayonet, manufacture of.....	E. Gaylord	28,269
Scaffolding	E. Duchamp.....	26,840
Scaffolding Brackets, securing, to buildings.....	T. J. Gifford.....	27,441
Scaffolds, Builders'	J. K. Lemon	27,815
Scaffolds, Portable	R. M. Lytle.....	29,607
Scaffolds, supporting.....	J. K. Lewis	29,086
Scales	H. N. and J. C. Bill.....	27,683
Scales, Grain.....	C. H. Hunter	28,236
Scales, Grain, Automatic.....	A. Gummer	27,712
Scales, Platform	J. Holcomb.....	30,922
Scalpels	A. G. Shaver	30,696
Scissors	F. B. Bowman	27,685
Scissors	J. G. De Coursey	29,250
Scissors and Nippers.....	H. D. Walcott.....	27,531
Scraper and Brush, Foot	H. Warren	30,859
Scrapers, Foot.....	E. G. Burger	29,568
Scrapers, Road	N. Peck.....	26,704
Screws, Heel, for skates.....	J. Heath	27,215
Screws, making	J. Griggs	29,373
Screws, Tobacco	N. Hoag and W. H. Tappey.....	27,631

Invention or Discovery.	Name of Patentee.	Number.
Screws, Wood	G. Freeman	29,963
Screws and Nuts, anti-friction	C. F. Spencer	28,613
Screw Plates	Z. L. Jacobs	28,279
Screw Threads, serrating edge of, on rollers	W. H. Howard	27,129
Scumming, Apparatus for	T. Molinier	30,339
Scythe Fasteners	C. L. Barritt	29,661
Scythes, hardening, Machines for	A. Holman and O. A. Kelly	29,973
Seaming Machines, double	L. T. Hulbert	26,679
Seats, Car	F. I. Palmer	27,469
Seats, Car	S. McGregor	27,645
Seats, Car, Bolts for	C. A. McEvoy	28,190
Seats, Carriage, adjustable	I. L. Vansant	28,792
Seats, Carriage, adjustable	J. A. Naylor	28,892
Seats, Carriage, extension	J. A. Naylor	29,709
Seats, Carriage, sliding	W. A. Bird	27,881
Serts, Chair	L. B. Batcheller	30,022
Seats, Drivers', for mowing and reaping machines	F. Getz	30,572
Seats, Pic-Nic or Excursion	J. M. Perkins	30,344
Seats, Water Closet	K. Spencer	26,866
Seats, Water Closet	G. C. Hinman	30,574
Seat and Cane, combination of	J. K. Andrews	28,643
Seats and Couches, Car	D. Pennoyer	29,813
Seats and Couches, Railroad Car	T. T. Woodruff	26,942
Seats and Couches, Railroad Car	J. H. Fisher	30,472
Seats and Couches, Railroad Car	E. Burke	30,517
Seeding Hoes	Z. B. Brown	30,526
Seeding Machines	G. B. Markham	26,696
Seeding Machines	J. W. Hudson	26,770
Seeding Machines	A. Ring	27,157
Seeding Machines	G. Copeland	27,273
Seeding Machines	A. R. Root	27,312
Seeding Machines	W. P. Penn	27,379
Seeding Machines	A. B. Hutchins	27,635
Seeding Machines	A. S. Notestein	27,647
Seeding Machines	E. B. Weakley	27,661
Seeding Machines	J. F. Gyles	27,713
Seeding Machines	A. R. Root	27,740
Seeding Machines	A. and R. B. McElvoy	27,759
Seeding Machines	F. Chamberlin	27,774
Seeding Machines	T. Lindsay	27,865
Seeding Machines	W. J. Baker	28,142
Seeding Machines	J. B. Turner	28,217
Seeding Machines	A. E. Doty	28,355
Seeding Machines	D. Eldred	28,357
Seeding Machines	A. Kurlin	28,379
Seeding Machines	S. T. Holly	24,483
Seeding Machines	M. Mitchell	28,593
Seeding Machines	M. B. Rupp	28,778
Seeding Machines	D. W. M. Lower	28,879
Seeding Machines	J. Sutton	28,914
Seeding Machines	T. Wilson	28,931
Seeding Machines	W. Workman	28,934
Seeding Machines	G. W. Clark	29,057
Seeding Machines	E. Emmert	29,067
Seeding Machines	J. S. Gage	29,071
Seeding Machines	E. Ritson	29,102
Seeding Machines	H. Kaller	29,176
Seeding Machines	W. P. Penn	29,191
Seeding Machines	D. J. Vail	29,420
Seeding Machines	W. S. Lawyer	29,497
Seeding Machines	A. McElroy and J. H. Kimble	29,505
Seeding Machines	J. Alsop	29,752
Seeding Machines	E. Badlam	29,754
Seeding Machines	M. H. Mansfield	29,801
Seeding Machines	A. R. Park	29,907
Seeding Machines	B. Barnard	30,115
Seeding Machines	D. Eldred	30,129
Seeding Machines	J. B. Duane	30,212
Seeding Machines	W. M. Garee	30,308
Seeding Machines	J. Morrison	30,749
Seeding Machines	S. R. Warner	30,779
Seeding Machines	F. H. Naylor and A. Ward	30,832
Seeding Machines	D. and W. W. Beal	30,865
Seeding Machines	H. Bell	30,866
Seeding Machines	H. Crofoot	30,871
Seeding Machines	J. V. H. Secor	30,890
Seeding Machines, Broadcast	J. Barnes	27,958
Seeding Machines, Centrifugal	J. R. Rogers	27,385
See, also, Planters, Seed.		
Seeds, Clover, Hulling, Machines for	M. F. Noraconk and D. Hoats	30,982
Settee or Chair	G. F. Buckley	30,665
Sewing Machines	A. Leyden	26,687
Sewing Machines	J. Dick	26,816

Invention or Discovery.	Name of Patentee.	Number.
Sewing Machines.....	A. F. Johnson.....	26,948
Sewing Machines.....	J. Thomson.....	27,082
Sewing Machines.....	J. M. Smith.....	27,079
Sewing Machines.....	G. Juengst.....	27,132
Sewing Machines.....	J. A. Davis.....	27,208
Sewing Machines.....	J. E. A. Gibbs.....	27,214
Sewing Machines.....	J. Rowe.....	27,260
Sewing Machines.....	A. W. Dopp.....	27,279
Sewing Machines.....	A. R. Paine.....	27,412
Sewing Machines.....	A. H. Jones.....	27,546
Sewing Machines.....	J. Smalley.....	27,577
Sewing Machines.....	J. J. Couch.....	27,593
Sewing Machines.....	L. W. Langdon.....	27,594
Sewing Machines.....	T. Newlove.....	27,761
Sewing Machines.....	W. Miller.....	27,867
Sewing Machines.....	W. W. Allen and J. Molyneux.....	27,944
Sewing Machines.....	J. S. McCurdy.....	28,097
Sewing Machines.....	G. B. Arnold.....	28,139
Sewing Machines.....	E. E. Bean.....	28,144
Sewing Machines.....	B. Holly.....	28,176
Sewing Machines.....	G. Little.....	28,287
Sewing Machines.....	L. Huffman.....	28,371
Sewing Machines.....	J. N. Chamberlin.....	28,452
Sewing Machines.....	S. E. Pettee.....	28,537
Sewing Machines.....	H. Ruddick.....	28,538
Sewing Machines.....	C. Scofield and C. Rice.....	28,610
Sewing Machines.....	J. Geiermann.....	28,746
Sewing Machines.....	W. H. Smith.....	28,785
Sewing Machines.....	J. S. Steiner.....	28,788
Sewing Machines.....	E. S. Yentzner.....	28,804
Sewing Machines.....	J. M. Rose.....	28,814
Sewing Machines.....	J. E. A. Gibbs.....	28,851
Sewing Machines.....	A. Leyden.....	28,877
Sewing Machines.....	F. Toggenburger.....	28,920
Sewing Machines.....	E. Booth.....	28,959
Sewing Machines.....	J. S. McCurdy.....	28,993
Sewing Machines.....	H. Mueller.....	28,996
Sewing Machines.....	T. J. Penny and W. B. Botsford.....	28,999
Sewing Machines.....	J. First.....	29,035
Sewing Machines.....	W. A. Sutton.....	29,202
Sewing Machines.....	W. C. Hicks.....	29,263
Sewing Machines.....	C. H. Willcox.....	29,448
Sewing Machines.....	D. Haskell.....	29,785
Sewing Machines.....	D. Tracy.....	30,012
Sewing Machines.....	T. S. Washburn.....	30,031
Sewing Machines.....	G. B. and A. Arnold.....	30,112
Sewing Machines.....	J. L. Garlington.....	30,139
Sewing Machines.....	A. F. Johnson.....	30,478
Sewing Machines.....	G. Felter.....	30,518
Sewing Machines.....	R. Leavitt.....	30,634
Sewing Machines.....	R. S. Payne.....	30,641
Sewing Machines.....	F. Heyer.....	30,731
Sewing Machines.....	J. W. Hardie.....	30,854
Sewing Machines, Binding guides for.....	W. Price.....	28,774
Sewing Machines, Cording guides for.....	W. Rankin.....	28,776
Sewing Machines, Driving mechanism of.....	J. Perkins.....	27,926
Sewing Machines, Hemming attachment for.....	W. P. Mitchell.....	28,889
Sewing Machines, Mechanism for Cloth marking in.....	H. W. Fuller.....	28,633
Sewing Machines, Mechanism for Startling.....	T. J. Alexander.....	28,642
Sewing Machines, Loop catches for.....	L. P. Collins.....	30,615
Sewing Machines, Shuttles for.....	L. Planer and J. N. Siegle.....	29,224
Sewing Machines, Shuttles for.....	G. Juengst.....	29,890
Sewing Machines, Stitch.....	J. Davis.....	27,620
Sewing Machines, Stitch made by.....	J. S. McCurdy.....	27,999
Sewing Machines, Tension apparatus for.....	C. G. Cross.....	27,948
Sewing, Making plaits in.....	F. A. Alden.....	27,029
Sewing stands for embroidery.....	D. Brickford.....	28,054
Sextant.....	L. Daser.....	27,891
Shade Fixtures.....	V. Drew.....	26,839
Shade Fixtures, Window.....	R. B. Burchell.....	29,461
Shafting, Hangers for.....	J. P. Collins.....	30,206
Shafting, Hangers and Boxes for.....	W. Watts.....	30,549
Shafts, Counter, Arrangement of.....	G. W. Davis.....	28,353
Shafts, Tug.....	D. R. Brown and A. C. Babcock.....	30,459
Shafts to Two-wheeled Vehicles, Connecting.....	H. M. Walker.....	28,796
Shaping and Moulding Machines.....	H. D. Stover.....	29,727
Sharpeners, Edge Tools.....	J. W. Wood.....	29,336
Sharpening Tools, Machines for.....	J. C. Cooke.....	30,208
Shears.....	J. Smith.....	26,955
Shears, Rotary Cutting.....	C. W. Brown.....	28,345
Shears, Sharpening.....	J. Armour.....	28,547
Shears, Tinman's, Holders for.....	W. W. Wilcox.....	27,016
Shingle Machines.....	S. Ruthenburg.....	27,075

Invention or Discovery.	Name of Patentee.	Number.
Shingle Machines.....	J. H. and A. E. Redstone.....	27,309
Shingle Machines.....	C. W. Dyer and C. M. Cummings.....	27,534
Shingle Machines.....	J. W. McLean and A. Gummer.....	28,591
Shingle Machines.....	J. D. Chism.....	28,649
Shingle Machines.....	E. T. Wheeler.....	28,798
Shingle Machines, Device for tilting the bolt in.....	T. P. Butterfield.....	27,690
Shingle Machines, Feeding the bolt in.....	N. S. Gilbut.....	28,168
Shingle Machines, Feeding bolt to the knife.....	D. Nicholson.....	27,192
Shingle Machines, Operating Tilting Tables in.....	J. B. Suitt.....	30,364
Shingles, Sawing.....	A. Pernot.....	29,911
Shingles, Sawing, from the bolt.....	J. M. Carlisle.....	28,734
Shingles, Sawing out.....	J. R. Hall.....	29,967
Ship's Air Ports.....	W. G. Manpin and J. B. Rooke.....	30,075
Ship Building.....	S. L. Pionnier.....	29,912
Ships, Buoying.....	T. C. McKean.....	26,856
Ships, Construction of.....	R. F. Loper.....	27,298
Ship's Holds from Water, Apparatus for freeing.....	J. W. Mackenzie.....	27,138
Ships, &c., Sheathing.....	J. Revere.....	29,916
Shirred Goods, Making.....	R. Solis.....	30,891
Shirred Goods, Manufacture of.....	H. H. Day.....	26,658
Shirting, Evening the Edges of.....	A. T. Underhill.....	30,029
Shirt Bosoms.....	J. Perego, Jr.....	30,154
Shirt Studs.....	W. F. Kubler.....	29,496
Shirt Studs.....	H. Simon.....	27,838
Shoemaker's Floats.....	E. Bates, J. West, and M. Weist.....	27,514
Shoemaker's Floats.....	F. L. Langley.....	28,285
Shoe and Bag Holders.....	J. Allender.....	27,030
Shoe Cleaners.....	T. Board.....	29,759
Shoe Laces, Fastenings for.....	L. I. Worden.....	26,939
Shoe Plates.....	T. W. Porter.....	28,194
Shoe Tips.....	W. M. Davis.....	27,433
Shoe Tips, Cutting Blanks for.....	G. A. Mitchell.....	28,887
Shoe Tips, Cutting and Swaging.....	H. M. Bearce and L. C. Peck.....	29,756
Shoe Tips, Swaging, Machines for.....	G. A. Mitchell.....	28,888
Shoes, Wooden Soled.....	H. Wright.....	27,414
Shot and Shells, Moulding.....	D. Huestis.....	28,277
Shovels.....	J. U. Flester.....	29,153
Shovels, Manufacture of.....	S. D. Nelson.....	28,293
Shovel and Tongs, Combination of.....	J. W. Evans.....	28,264
Shutters, Metallic.....	J. Hodgson.....	27,052
Shutters, Metallic, Rolling.....	J. B. and W. W. Cornell.....	28,259
Shutters, Operators for.....	E. Mattocks.....	27,372
Shutters, Operators for.....	E. Mattocks.....	27,458
Shutters, Operators for.....	J. Ebner.....	27,535
Shutters, Operators for.....	C. Seltman.....	28,906
Shutters, Operators for.....	J. Solan.....	30,991
Shutter and Awning for Windows, Combined.....	J. David.....	29,675
Shutters and Stand, Window.....	J. W. Knapp.....	29,890
Shutter Fasteners.....	A. Ferber.....	26,979
Shutter Fasteners.....	J. Frick.....	30,571
Shuttles for Sewing Machines.....	L. Planer and J. N. Seigle.....	29,224
Shuttles for Sewing Machines.....	G. Juengst.....	28,869
Sieves for separating grain, &c.....	H. W. Putney.....	30,183
Sifters, Ash.....	L. F. Frazee.....	27,439
Sifters, Ash.....	S. Wheeler.....	30,942
Sifters, Coal.....	J. A. Howland.....	26,768
Sifters, Coal.....	J. A. Scheffer.....	26,789
Sifters, Coal.....	G. W. Pittock.....	30,983
Signal Apparatus.....	T. T. Woodward.....	28,336
Signals, Railway.....	P. F. Milligan.....	30,979
Silicates, Soluble, Preparation of.....	G. E. Vanderburgh.....	28,540
Silk, Stretching, in the Hank, Machines for.....	L. Dimock.....	29,146
Sinks, Fitting.....	J. Ingram.....	27,545
Siphons for Gas Retorts.....	H. Guyld.....	27,711
Skates.....	T. W. Brown.....	26,882
Skates.....	L. J. Wicks.....	27,015
Skates.....	C. A. Ruff.....	27,074
Skates.....	J. R. Henshaw.....	27,187
Skates.....	B. Stetson.....	28,042
Skates.....	J. Lovatt.....	28,495
Skates.....	W. Scarlett.....	28,506
Skates.....	J. Heath.....	28,984
Skates.....	L. and I. J. White.....	29,116
Skates.....	E. C. Jenkins, Jr.....	29,378
Skates.....	L. Fogg.....	29,871
Skates.....	I. F. Blondin.....	30,195
Skates.....	E. H. Graham.....	30,278
Skates, Manufacture of.....	E. B. Phillips.....	27,193
Skates, Self-adjusting.....	L. J. Masterson.....	30,237
Skates, Shoe and Foot Checks for.....	J. R. Gibbs.....	30,627
Skates, Spring.....	R. Lovejoy.....	27,137
Skates, Spring.....	J. S. Mitchell.....	27,232
Skates, Wheel.....	R. Shaler.....	28,509

Invention or Discovery.	Name of Patentee.	Number.
Skate Fastenings	H. Rasquin.....	26,783
Skirts	W. Heppenstall.....	30,534
Skirts, Hooped, Clasp for	G. P. Evans	30,872
Skirts, Hoops for	C. Neumann	28,893
Skirts, Skeleton.....	R. W. Hill	26,848
Skirts, Skeleton.....	S. S. Sherwood.....	28,941
Skirts, Skeleton.....	E. G. Atwood	30,907
Skirts, Skeleton, Manufacturing.....	F. S. Otis.....	28,598
Skirts, Spiral Hoop	D. G. Rollin.....	30,838
Slat for Bed Bottoms.....	J. N. Dennett.....	29,697
Slat Machines for Blinds.....	W. F. Johnson and J. Doyle.....	29,380
Slate from Coal, Apparatus for Separating	L. P. Garner	29,479
Slates, Artificial.....	T. J. Mayall.....	27,818
Slates, School.....	G. N. & G. Munger.....	26,916
Sled, Portable	J. Lamb	27,189
Sliver Machines.....	F. T. Grant.....	28,470
Slivering Machines.....	H. L. Nichols	30,418
Smoke, Combustion of, in Steam Boilers' Furnaces...	D. H. Williams.....	28,335
Smut Machines.....	G. B. Turner	28,117
Smut Machines.....	S. Favinger.....	29,215
Smut Machines.....	R. Mohler.....	29,297
Smut Machines.....	L. Drake and E. Hewitt.....	29,367
Smut Machines.....	H. W. Shipley.....	30,002
Smut Machines.....	H. L. Pierce.....	30,538
Smut Machines.....	R. Thompson.....	30,994
Smut and Scouring Machines	J. White.....	30,171
Snow or Ice, Conversion of, into large blocks.....	H. Morse	28,292
Soap	A. J. Woodworth.....	27,496
Soap	A. H. Platt.....	26,862
Soap, Compositions for.....	E. Patrie.....	26,703
Soap, Compositions for.....	M. A. Butler	30,561
Soap, Compositions for	H. N. Wilson.....	30,699
Soap, Manufacture of.....	G. W. N. Yost	27,605
Soil, Breaking and Pulverizing, Machines for.....	R. J. Gathing.....	28,465
Soles of Boots and Shoes	I. B. Hayden	26,903
Soles of Boots and Shoes, Burnishing Edges of, Machine for.....	E. T. Ingalls	28,181
Soles of Boots and Shoes, cutting	L. S. Graves	30,060
Soles of Boots and Shoes, cutting	C. H. Griffin.	30,520
Soles, Cutting, Machines for	G. W. Parrott	27,306
Soles, Cutting, Machines for	D. Knox and T. Ditchburn.....	27,453
Soles of Boots and Shoes, Filling for	E. N. Foote	28,265
Soles and Uppers of Boots and Shoes, Cutting out.....	W. G. Greeley.....	27,123
Soles, Wooden, of Boots and Shoes	A. Hanvey	28,077
Sounding Apparatus	J. B. Van Deusen.....	30,778
Sounding Meter, Deep Sea.....	J. M. Brooke.....	29,454
Sowing Machines.....	W. W. Williams	27,754
Sowing Machines.....	W. D. Mason.....	29,897
Sowing Machines.....	R. Chapman.....	30,388
Sowing Machines.....	D. C. Teller.....	30,433
Spading Machines	S. Gwynn.....	29,782
Spark Extinguishers for Steam Boilers.....	D. S. Harris.....	27,799
Sparks from Locomotives Engines, Arrangement for disposing of.....	L. P. Teed.....	29,531
Spectacle Cases, Catch for	G. A. Commings.....	26,891
Spectacle Temples	E. W. Gordon and W. H. Peckham.....	27,359
Spindles, Mill	S. P. Ruff.....	27,386
Spindles, Mill	S. Hoyt	26,993
Spindles, Oiling	E. N. Steere	30,937
Spinning Frames, Cap	G. Bradley	26,812
Spinning Frames, Driving Bands for.....	N. H. Slade and J. N. Seranton	29,527
Spinning Frame Ring	M. P. Wilmarth	26,805
Spinning, Machinery for.....	G. Draper	27,434
Spirit Levels	W. T. Nicholson	28,104
Spirit Levels, Attaching, to a Square	J. Steger	26,956
Spoke Machines.....	J. Stamm and J. Shubert.....	28,787
Spoke Machines.....	S. B. Wilkins.....	29,117
Spoke Machines.....	J. Gilchrist.....	30,474
Spoke Shaves	S. Leonard.....	30,071
Spool Stands, Revolving	J. P. and F. V. Wilson.....	30,513
Spooling Thread, Machinery for.....	C. M. Spencer.....	27,012
Spools for Sewing Machines	G. Churchill.....	29,138
Spoons, burnishing, Machines for	H. M. Jacobs.....	29,650
Spoons, burnishing, Machines for	H. M. Jacobs.....	30,734
Spoon* and Forks, Culinary.....	A. Hills.....	27,802
Spring Balances, Compensating	O. C. Squyer	28,212
Springs for Bed Bottoms	R. Holden.....	26,675
Springs for Bed Bottoms	J. Bailey and J. De Camp	27,680
Springs for Bed Bottoms	W. A. Morse and D. S. Bean.....	28,763
Springs for Bed Bottoms	M. Rosenberg and H. Schenckle.....	30,635
Springs, Bed Bottom.....	H. R. Crampton	30,049
Springs, Car.....	R. Vose.....	26,723
Springs, Car.....	W. J. F. Liddell.....	27,411

Invention or Discovery.	Name of Patentee.	Number.
Springs, Car.....	W. Kingsley	28,237
Springs, Car.....	R. Vose.....	28,619
Springs, Car.....	R. Vose.....	28,703
Springs, Car.....	J. J. McCormick and J. E. Jerrold.....	29,222
Springs, Carriage	J. M. Forrest.....	26,981
Springs, Carriage	E. Maynard	27,731
Springs, Carriage	G. H. Laub.....	29,605
Springs, Carriage	J. B. Pressey and D. Sheets.....	30,422
Springs, Carriage, Adjustable.....	I. Carter	27,036
Springs, Carriage, Adjustable.....	G. Palmer.....	29,306
Springs, Carriage, Railroad	H. Gardiner.....	26,668
Springs for Clocks, Winding, by Currents of Air.....	C. B. Hoards	27,721
Springs, Door.....	J. Post.....	28,689
Springs, Door.....	J. Boyd and J. Belford.....	30,383
Springs, Door.....	R. B. Donaldson.....	30,531
Springs, Foundation, for Beds, Sofas, &c.....	J. H. Crane	27,037
Springs, Helical.....	J. W. Peck.....	26,954
Springs, India Rubber, for Railroad Cars	T. F. Allen.....	30,450
Springs, Lever, Compensating.....	W. S. Pratt.....	29,304
Springs, Railroad Car	A. T. Watson	27,587
Springs, Railroad Car	G. L. Turner	29,732
Springs, Railroad Car, &c	D. Johnson	26,905
Springs, Steel, Tempering.....	C. G. and H. M. Plympton.....	26,600
Springs of Skeleton Skirts, Covering the.....	J. T. Loft	27,456
Sprinkling Attachment for Railroad Cars.....	H. Mitchell	28,764
Spurs, Heel	McC. Young, Jr.....	27,019
Stables, Safety, for Horses, &c.....	W. E. McIntire.....	30,077
Staging Supporters for use of Mechanics	A. Reynolds, Jr.....	27,921
Stalks, Cotton and Corn, Cutters.....	G. S. Roudebush.....	30,645
Stalks, Cutting and Pulling, Machines for.....	H. Snyder	30,359
Stalks, &c., Cutting, Machines for.....	M. E. Rudasill.....	30,501
Stamping Heads, Casting.....	P. W. Gates.....	29,372
Stamping Machines, Portable, for Crushing Stones, &c.....	J. Steven	27,744
Stamps, Post Office.....	J. Spear	27,194
Starch, Cleaning.....	C. S. Irwin.....	28,278
Starch, Manufacture of	C. S. Irwin.....	27,130
Staves, Jointing	W. Robinson.....	29,996
Staves, Jointing Machines for	J. F. and I. W. Bristow.....	28,962
Stave Jointers	E. Greenlee.....	29,965
Staves, Machines for dressing	E. and B. Holmes.....	26,766
Staves, Machines for dressing	W. M. Sloane	27,161
Staves, Machines for jointing.....	C. M. Young	29,449
Staves, Machines for planing	J. de Lihacheff	30,210
Staves, riving and dressing	W. Robinson	29,997
Staves, sawing	W. W. and J. Hurlbut	28,986
Staves, Sawing Machines for.....	H. H. Evarts	29,125
Stave Machines.....	J. W. Adams	27,607
Stave Machines.....	W. Trapp	28,701
Stave Machines.....	W. M. Sloane	29,199
Stave Machines.....	S. F. Gelston, J. T. Johnson, and C. R. Tomkins.....	30,178
Steam, Apparatus for decomposing.....	John A. Bassett.....	26,963
Steam, Apparatus for superheating.....	S. N. Cawhalho.....	26,731
Steam, superheating	G. A. Stone.....	27,013
Steam Boilers.....	S. Norris	26,701
Steam Boilers.....	James Montgomery	26,779
Steam Boilers.....	W. Schawbel.....	26,788
Steam Boilers.....	J. Armstrong	27,340
Steam Boilers.....	G. A. Stone and J. A. Whipple.....	27,843
Steam Boilers.....	J. Montgomery	27,922
Steam Boilers.....	E. M. Tarbell.....	27,954
Steam Boilers.....	B. H. Wright.....	28,032
Steam Boilers.....	J. S. Colvin	28,657
Steam Boilers.....	M. R. Clapp	28,711
Steam Boilers.....	N. S. Bean and J. G. Collins	29,032
Steam Boilers.....	J. Brown.....	29,241
Steam Boilers.....	J. Vaile	29,334
Steam Boilers.....	J. H. Boardman.....	29,355
Steam Boilers.....	G. W. Rains.....	29,615
Steam Boilers.....	E. W. Smith and J. H. Mars	30,258
Steam Boilers, applying fusible metallic plugs to.....	I. S. Saunders	29,322
Steam Boilers, Composition for preventing incrustation of.....	H. F. and L. Knoderer.....	26,683
Steam Boilers, Feed Water Apparatus for.....	I. Hibbard	26,847
Steam Boilers, Feed Water Apparatus for.....	C. and G. M. Woodward	27,853
Steam Boilers, Feed Water Apparatus for.....	H. Giffard	27,979
Steam Boilers, Feed Water Apparatus for.....	G. W. Raines.....	28,011
Steam Boilers, Feed Water Apparatus for.....	W. J. Sanderson and S. Stanton.....	28,307
Steam Boilers, Feed Water Apparatus for.....	E. Pierce.....	28,685
Steam Boilers, Feed Water Arrangement for	T. Snowdon.....	27,743
Steam Boilers, Feeding Apparatus for.....	T. Shaw	29,444
Steam Boilers, Feed Water Heaters for	J. Codling, Jr., and J. McCunniff.....	27,271
Steam Boilers, Feed Water Heaters for	W. C. Drum.....	28,840

Invention or Discovery.	Name of Patentee.	Number.
Steam Boilers, Feed Water Regulators for	J. Stowell	27,601
Steam Boilers, Low-water Alarm for	C. H. Brown	29,455
Steam Boilers, Low-water Detector for	J. W. Hopper	29,277
Steam Boilers, Low-water Safety Apparatus for	J. Ashcroft	27,508
Steam Boilers, prevention of incrustation of	N. B. Webster and R. W. Young	30,511
Steam Boilers, regulating draught and preventing explosion of.	H. L. Justice	28,675
Steam Boilers, Regulators for	C. A. Wilson	28,123
Steam Boilers, Safety Apparatus for	C. McCarthy	30,336
Steam Boilers, Safety Casing for	S. Soliday	27,317
Steam Boilers, Safety Feed Apparatus for	L. J. Knowles	27,452
Steam Boilers, Sediment Collector for	J. T. Price	28,303
Steam Boilers, testing, Hollow Floats for	G. W. Lane	27,725
Steam Engines	M. Cridge and S. Wadsworth	26,664
Steam Engines	Wm. L. Gold	26,901
Steam Engines	H. W. Dopp	27,355
Steam Engines	F. Douglas	27,704
Steam Engines	O. C. Evans	27,786
Steam Engines	J. Randall	28,242
Steam Engines	W. Birkbeck	28,957
Steam Engines	G. W. Van Deren	29,642
Steam Engines	W. Wells	30,030
Steam Engines	R. C. Barton	30,373
Steam Engines, Condensers for	B. F. Lemmon	29,499
Steam Engines, Oscillating	Wm. S. Mackintosh	26,852
Steam Engines, Oscillating	Wm. S. Mackintosh and J. Hemphill	26,853
Steam Engines, Oscillating	M. Kunkel	27,387
Steam Engines, reworking the waste steam of	F. Datchy	27,532
Steam Engines, Rotary	R. F. Brower	27,100
Steam Engines, Rotary	J. Parsons	27,148
Steam Engines, Traction	J. F. Holloway	28,475
Steam Engines for Street Passenger Cars	R. H. Long	26,911
Steam Engines, Surface Condensers for	W. Sewell	27,573
Steam, generating	S. Gwynn	29,482
Steam Generators	Wm. Rice	26,927
Steam Generators	R. E. Rogers	27,930
Steam Generators	B. Garvey	29,216
Steam Generators	J. Johnson	30,326
Steering Apparatus	J. S. Colvin	26,652
Steering Apparatus	D. Jones	27,223
Steering Apparatus	J. T. Chabot	27,270
Steering Apparatus	W. W. Huse	27,875
Steering Apparatus	A. D. Rollins	28,813
Steering Apparatus	E. W. Tarbell	29,447
Steering Apparatus	N. Snow, Jr.	29,630
Steering vessels	F. E. Sickels	29,200
Steel, manufacture of	A. K. Eaton	27,707
Steel, Process of manufacturing	B. Freutler	27,025
Steel, tempering	J. Wright	26,741
Stereoscopic Instruments	W. Loyd	26,912
Stereoscopic Pictures, Cases for exhibiting	G. H. Sealey and J. Lee	27,572
Stereotype Plates, making	S. H. Mix	29,091
Stills	S. Godfrey and others	28,939
Stirrups	D. W. Clark	29,953
Stirrups	D. W. Clark	30,299
Stirrups	J. R. Williamson	30,369
Stitch	A. F. Johnson	26,906
Stock, marking	J. Merry	29,619
Stock, Neck	W. Watson	28,705
Stones, Artificial, Composition for	W. H. Sherwood	27,480
Stones, Etching, Composition for	A. Hoen	27,981
Stones, Machines for breaking	E. W. Blake	27,882
Stones, Machines for crushing	G. H. Wood	28,031
Stones, Machines for crushing	G. A. Rollins	29,197
Stones, &c., Portable Stamping Machines for crushing.	J. Steven	27,744
Stone Artificial, Composition for	C. D. Page	27,563
Stone Dressing Machines	G. I. Wardwell	26,802
Stone Dressing Machines	F. Schwalm	29,106
Stone Dressing Machines	A. Smith	30,504
Stone Dressing Machines	M. H. Bacon	30,557
Stools, Camp	J. W. Willett	28,430
Stools, Camp	R. M. Garrettson	29,580
Stools, Milking	L. Loring	30,583
Stoppers for Chain Cables	J. Tucker	26,722
Stops and Fastenings, Window	T. Williams	29,209
Stoves	H. B. Fay	26,756
Stoves	I. Van Wormer	26,938
Stoves	J. W. Coleman	27,111
Stoves	J. Walch	27,488
Stoves	W. J. Cantels	28,035
Stoves	S. Shadbolt	28,203
Stoves	J. C. Henderson	28,482
Stoves	J. G. Treadwell	28,522

Invention or Discovery.	Name of Patentee.	Number.
Stoves.....	W. H. Smith	28,783
Stoves.....	C. Jones.....	29,175
Stoves.....	S. H. Ransom.....	29,312
Stoves.....	J. S. and M. Peckham.....	29,517
Stoves.....	J. Stuber, F. Frank, and P. D. Tobie.....	29,530
Stoves.....	J. Magee and W. J. Towne.....	29,608
Stoves.....	W. F. George.....	29,687
Stoves.....	W. B. Treadwell	30,097
Stoves, Coal.....	L. Crandall.....	29,249
Stoves, Cooking.....	E. J. Cridge.....	26,886
Stoves, Cooking.....	S. S. Curtis.....	27,207
Stoves, Cooking.....	C. O. Greene	27,216
Stoves, Cooking.....	N. S. Vedder	27,398
Stoves, Cooking.....	A. C. Barstow	27,513
Stoves, Cooking.....	J. C. Henderson.....	27,717
Stoves, Cooking.....	J. C. Henderson.....	28,081
Stoves, Cooking.....	S. S. Jewett.....	28,673
Stoves, Cooking.....	R. K. Cavanaugh and H. Y. Lazear.....	29,244
Stoves, Cooking.....	W. Johnson and H. Wansbraugh	29,381
Stoves, Cooking.....	Z. Hunt	30,142
Stoves, Cooking.....	M. Pratt.....	30,499
Stoves, Cooking.....	G. G. Wolfe.....	30,514
Stoves, Cooking.....	De Witt C. Farrington.....	30,674
Stoves, Cooking.....	H. Huntley and W. Caven.....	30,733
Stoves, Cooking, Fruit drying attachment to	D. C. Colby.....	30,105
Stoves, Covers for.....	J. Russell.....	30,988
Stoves, Gas.....	E. A. Leland	27,595
Stoves, Gas.....	I. Cressman	30,669
Stoves, Gas.....	J. S. Mahan	30,947
Stoves, Radiators for.....	C. P. Crossman and J. B. Brown.....	30,301
Stoves and Ranges, Cooking.....	R. D. Granger.....	27,047
Stoves and Ranges, Cooking.....	S. B. Sexton.....	30,254
Straw Paper, Manufacture of.....	R. T., J. W., and A. J. Smart	27,653
Straw, Preparation for making Paper Pulp of	J. B. Palser and G. Howland.....	27,564
Studs, Safety	L. De Masure.....	27,114
Studs, Shirt	C. E. Haskins.....	30,968
Stumps, Extracting	J. C. Daman.....	27,353
Stump Extractors.....	C. Bates.....	27,879
Stump Extractors.....	L. C. English.....	27,949
Stump Extractors.....	A. Broughton.....	28,806
Stump Extractors.....	J. Hamlyn.....	28,856
Stump Extractors.....	N. Parrish.....	28,897
Stump Extractors.....	W. and D. Kimmel	29,603
Stump Extractors.....	J. B. Lyons.....	29,606
Submarine Operators	G. W. Martin.....	29,296
Sugar, Clarifying.....	H. G. C. Paulsen.....	28,769
Sugar, Crushing, Apparatus for	A. and F. Brown.....	27,613
Sugar, Crystallizing, Tanks for.....	C. E. Bertrand.....	30,951
Sugar, Cutting.....	T. H. Quick.....	28,903
Sugar, Cutting, Machines for	C. Kinzler.....	30,145
Sugar, Draining, Apparatus for	J. J. Umbehagen.....	29,115
Sugar, Draining, Machines for.....	A. W. J. Mason.....	28,189
Sugar, Refining	H. G. G. Paulsen	30,108
Sugar Cane, Crushing, Machine for.....	T. Grundman.....	27,900
Sugar Cane Leaf Strippers	P. P. Mills.....	30,927
Sugar Cane, Windrowing, Machines for.....	B. A. Jenkins.....	28,987
Sugar Holders and Distributors.....	T. Lewis	27,726
Sugar Juices, Apparatus for evaporating.....	S. W. Eells.....	27,783
Sugar Juices, Apparatus for evaporating.....	C. Harvey	28,171
Sugar Juices, Skimmers for	J. M. Jones.....	27,257
See, also, Saccharine Juices.		
Sugar Kettle Trains, Arrangement of.....	J. P. Henderson.....	29,076
Sugar Loaves, cutting or dividing, Apparatus for.....	C. Kinzler and W. Rosebrock	28,183
Surveying Compasses	G. W. Dickinson, Jr.....	27,210
Surveying Instruments.....	A. Ware.....	29,835
Surveyors' Levelling Instruments.....	L. Lea	29,703
Surveyors' Measures.....	W. H. Paine.....	29,514
Surveyors' Tackle Cases.....	W. H. Paine.....	29,096
Sweeping Machines for Streets	R. A. Smith.....	27,481
Sweeping Machines for Streets	R. A. Smith	27,839
Sweeping Machines for Streets	G. M. Ramsay	29,101
Sweeping Machines for Streets	J. Edson.....	29,577
Sweeping Machines for Streets	S. Longley	30,644
Swifts.....	C. P. S. Wardwell.....	28,319
Swifts.....	M. Heminway	30,064
Swifts.....	C. W. Pearson.....	30,642
Swifts.....	N. Benedict	30,867
Swings, Portable.....	L. K. Selden	28,015
Switch Plates for City Railroads.....	W. Ebbitt	29,255
Switch Stands, Railroad.....	R. A. Wilder	27,493
Switches, Railroad.....	H. W. Elliott and V. S. Concklin.....	25,660
Switches, Railroad.....	I. H. Shedd and W. Edson	26,933
Switches, Railroad.....	J. S. Sanson.....	27,009

Invention or Discovery.	Name of Patentee.	Number.
Switches, Railroad.....	S. H. Hodges.....	27,051
Switches, Railroad.....	J. C. Whitson.....	29,208
Switches, Railroad.....	G. C. Beach.....	30,116
Switches, Railroad.....	H. Tupper.....	30,845
Switches, Railroad, Operating.....	S. Heywood.....	29,786
Switches, Railroad, Operating.....	G. K. Hyde.....	29,792
Switches, Safety, Railroad.....	H. N. Rhodes.....	29,821
Switches, Sliding, Railroad.....	H. N. Rhodes.....	29,820
Syringes.....	B. Irving.....	29,083
Syringes, Enema.....	D. Minthorn.....	27,596
Syringes, Enema.....	T. B. and B. L. Richardson.....	28,196
Syringes, Enema.....	E. G. Stevens.....	29,112
T.		
Tables, Adjustable.....	O. C. Dodge.....	30,671
Tables, Billiard, Pocket irons for.....	J. P. Ellicott.....	28,128
Tables, Billiard, Chalk holders for.....	J. P. Ellicott.....	28,435
Tables, Circular.....	J. F. Finger.....	29,776
Tables, Extension.....	G. Hemzinger.....	30,823
Tables, Ironing.....	G. F. Zimman.....	26,728
Table Leaf Supports.....	S. Walker.....	27,026
Table Mats.....	I. Leonard.....	26,913
Table Plates.....	D. H. Shirley.....	28,693
Table Secretary.....	F. J. Kenkel.....	27,126
Tab's, Cross-cut, Making.....	T. S. Disston.....	28,567
Tacks, Shoe.....	J. H. Knight.....	30,974
Tanks, Stone, Construction of.....	L. B. Darling.....	29,674
Tanning.....	R. B. Thompson.....	26,800
Tanning.....	P. Daniels.....	27,088
Tanning.....	W. R. Webster.....	27,177
Tanning.....	C. L. Robinson.....	27,259
Tanning.....	D. Needham.....	27,825
Tanning.....	R. Harper.....	30,220
Tanning.....	R. Crane and W. Baldwin.....	30,390
Tanning.....	A. Dietz.....	30,392
Tanning, Apparatus for.....	J. J. Cowell.....	27,529
Tanning, Apparatus for.....	W. H. Heald.....	30,062
Tanning, Apparatus for.....	J. S. Wheat.....	30,598
Tanning Apparatus, construction of.....	D. Aldrick.....	29,656
Tanning, Composition for.....	W. D. Bunting.....	26,966
Tanning, Composition for.....	J. L. Wells.....	30,367
Tanning, Composition for.....	A. Hill.....	29,488
Tanning, Compounds for.....	D. J. Cochran.....	29,140
Tanning Extracts, preparation of.....	J. Connell.....	29,143
Tanning Leather, Composition for.....	J. Nussley.....	27,648
Tanning, method of.....	M. A. Bell.....	27,961
Tanning purposes, concentrated Extracts for.....	J. Connell.....	27,859
Tapes, measuring.....	O. W. Minard.....	28,101
Tassels for window curtains.....	E. Maynard.....	27,554
Teaching Children, Device for.....	J. J. Johnston.....	29,888
Teeth, Artificial.....	J. W. Moffitt.....	30,684
Teeth, Artificial, fastening.....	A. M. and J. L. Asay.....	27,678
Teeth, bending, for horse rakes.....	H. Brandt.....	28,555
Teeth, Cultivator.....	G. C. Aiken.....	27,092
Teeth, Cultivator.....	H. B. Hammon.....	27,797
Teeth, Cultivator.....	G. C. Aiken.....	27,956
Teeth, Cultivator.....	D. B. Rogers.....	28,198
Teeth, Cultivator.....	C. H. Sayre.....	28,780
Teeth, Cultivator.....	J. Turner and T. P. Smith.....	28,945
Teeth, Saw.....	J. Mason.....	29,982
Teeth, Saw, cutting, Machines for.....	F. Schultee.....	28,508
Teeth, Saw, setting, Machines for.....	T. S. and H. Disston.....	29,772
Teeth for scattering hay.....	J. C. Stoddard.....	29,327
Telegraph Cables, laying.....	W. H. Horstman.....	26,677
Telegraph Wires.....	E. D. Rosencrantz.....	27,475
Telegraph Wires, Compound for insulating.....	J. M. Batchelder.....	27,770
Telegraphic Apparatus.....	L. Bradley.....	29,761
Telegraphic Instruments.....	A. G. Holcomb.....	28,274
Telegraphic Instruments.....	D. Flanery.....	29,686
Telegraphic Instruments.....	E. F. Reynolds.....	29,747
Telegraphic Machines.....	J. Weiss.....	28,334
Telegraphic Repeaters.....	J. J. Clark.....	29,247
Telegraphing, Electric.....	S. F. Van Choate.....	27,506
Telegraphs, Electric.....	G. Doyle.....	26,973
Telegraphs, Magnetic.....	S. F. Van Choate.....	27,655
Temples.....	J. H. Woodward.....	28,043
Temples.....	J. C. Tilton.....	30,896
Tenoning Frames.....	A. Greenwood.....	29,589
Tenoning Tools.....	O. Schevenell.....	30,889
Tenons, cutting round.....	L. A. Dole.....	26,822
Tent Frames.....	J. G. Dodge.....	27,277
Thills, Carriage, attachment of.....	H. E. Clinton.....	27,110

Invention or Discovery.	Name of Patentee.	Number.
Thills, Carriage, attaching	E. H. Plant.....	29,614
Thills, Carriage, Safety Straps for securing.....	C. B. Wood	27,086
Thills, Carriage, Safety Straps for securing.....	C. B. Wood	27,087
Thills to Vehicles, attaching	A. Odell.....	26,859
Thills to Vehicles, attaching	A. G. Ritter	26,926
Thills to Vehicles, attaching	F. Odell.....	27,562
Thills to Vehicles, attaching	H. Sherman	27,574
Thills to Vehicles, attaching	L. W. Boynton.....	27,755
Thills to Vehicles, attaching.....	L. C. Miner	29,187
Thermometer, Air and Mercurial	J. B. Currier and A. J. Simpson	26,969
Thermometer Cases for steam boilers	G. E. Hayes	28,172
Thermostat	H. A. Seymour	27,336
Thread, dressing and finishing, Machines for	O. Hall and T. Merrick	29,690
Thread-dressing Machines	O. Hall and T. Merrick	29,484
Thread-dressing Machines	J. Loeb	29,981
Thread-dressing Machines	O. G. Hall.....	30,814
Thread-dressing Machines	H. Conant and L. C. Ives	30,824
Thread-polishing Machines.....	L. C. Ives.....	29,174
Thread, Tool for cutting and pulling	T. Sullivan.....	27,244
Thread and Yarn, manufacture of	S. M. Allen.....	27,877
Threshing Machines	D. S. Wagener	28,118
Threshing Machines	S. E. Oviatt	29,095
Threshing Machines	W. W. Dingee	29,254
Threshing Machines	A. B. Crawford.....	29,865
Threshing Machines	D. Barger.....	29,946
Threshing Machines, Spikes for	H. B. Colton	30,583
Threshing Peas and Beans, Machines for	J. T. Smith.....	29,315
Ties, Cattle	G. Hull.....	29,790
Ties, Cotton Bale.....	Z. W. and E. D. Lee	28,991
Ties for cotton bales	C. W. Wailey	27,660
Ties, Cross, Railroad, Machine for ramming earth around.	R. C. Bailey.....	30,792
Ties, Iron, for cotton bales	W. Stewart.....	28,110
Ties, Iron, for cotton bales	W. S. Loughborough.....	28,187
Ties, Iron, for cotton bales	C. C. Bier.	28,825
Ties, Iron, for cotton bales	P. Davey.....	30,126
Ties, Metal, for cotton bales.....	J. Aiken	28,044
Tiles, Block for forming	J. Molyneux.....	30,026
Tiles, Drain	E. W. Rowe	29,040
Tiles, Drain, Bottom Plates for	J. Parsons.....	29,516
Tiles, Drain, laying	A. F. Baker	28,050
Tiles for flooring, manufacture of.....	T. J. Mayall.....	30,417
Tiles, Machines for drain	S. M. Smith and C. Winegar.....	26,793
Tiles, Machines for drain	J. Hotchkiss.....	27,669
Tiles, Machines for drain	G. Graessle.....	29,586
Tillers, Ships'	J. T. Chabot.....	26,650
Timber, preservation of, Composition for	J. Dain	29,363
Time Indicator for railroads	T. Moffet.....	27,006
Time Table for railroads	C. M. Plumb	27,152
Tin Ware, manufacture of	S. J. Olmsted.....	26,860
Tires, bending, Machines for.....	W. and J. H. Mosher and J. J. Harris.....	27,143
Tires, bending, Machines for.....	W. Bailey.....	29,556
Tires, cooling and setting	P. Kopfer.....	28,492
Tires, shrinking	S. S. Greene.....	28,471
Tires, shrinking	A. P. Cassel.....	30,387
Tires, shortening	A. Voorhees.....	28,426
Tires, tightening, on wheels.....	E. Bass	29,947
Tires, upsetting.....	G. McKown.....	27,555
Tires, upsetting.....	L. Rile.....	27,813
Tires, upsetting.....	H. Barringer.....	28,728
Tires, upsetting.....	J. Olmstead and W. A. Walker	29,573
Tires, upsetting, Machines for.....	C. V. Statler	29,529
Tires, &c., Upsetting, Machines for.....	O. Foster.....	29,477
Tires, Wagon, Apparatus for heating.....	J. N. Whitaker.....	28,721
Tires on Wheels, Adjusting	W. S. Harrison.....	28,982
Tobacco, Straightening and Pressing.....	W. W. Justis.....	29,976
Toilets, Composition for.....	S. American.....	29,944
Toombstones	T. Windell.....	28,029
Tongs and Shovel, Combination of.....	J. W. Evans	28,264
Tools, Edge, Manufacture of.....	S. W. Collins	30,658
Tools, Holders for.....	S. Stevens	30,548
Torches for night processions.....	J. Edge.....	28,661
Trace Fasteners	S. Walker.....	29,847
Traces, Safety bar, for vehicle	R. Rolph	27,566
Traps, Air, for steam engines	T. Sault.....	27,313
Traps, Animal.....	R. P. Buttles	26,883
Traps, Animal.....	J. P. Wilson	27,017
Traps, Animal.....	V. O. and J. R. Spencer	27,080
Traps, Animal.....	W. Tinsley	27,083
Traps, Animal.....	L. W. Buxton.....	27,967
Traps, Animal.....	W. Wright.....	28,820
Traps, Animal.....	G. Slusser.....	29,627
Traps, Animal.....	H. Y. Wildey	30,269

Invention or Discovery.	Name of Patentee.	Number.
Traps, Ant	G. W. Cottingham and J. S. Menefee.....	29,468
Traps, Fly.....	H. H. Robertson.....	29,008
Traps, Fly.....	S. S. Day	30,619
Traps, Moth	J. W. Heard.....	27,048
Traps, Rat.....	A. Hunter.....	26,947
Traps, Rat.....	H. A. Ridley	27,071
Traps, Rat	L. Parker	29,190
Traps, Steam.....	A. Lapham.....	26,950
Traps, Steam.....	Frank Douglas.....	27,040
Traps, Steam.....	L. Ferguson.....	27,625
Traps, Steam.....	S. Lee	27,914
Traps, Steam.....	C. C. Walworth	28,795
Traps, Steam.....	N. Upham	29,833
Traps, Stench, for sinks.....	A. Carson.....	30,121
Traps for water closets	H. Boyd.....	27,612
Treadle connection for machinery	A. A. Raymond.....	29,994
Trees, Device for sustaining.....	W. A. Livingston	30,584
Trees, Felling	P. Johnson.....	28,280
Trees, Felling, Machines for	A. P. Torrence	29,019
Trees from insects, Apparatus for preserving	N. Potter, Jr.....	29,098
Trees, Protectors for	W. W. Taylor.....	29,730
Trees, Pruning, Instruments for	D. P. Chamberlin..	29,669
Troughs, Eave.....	G. M. Selden.....	30,934
Troughs, Eave, Machine for making.....	W. H. Henderson.....	28,369
Troughs, Eave, Machines for making.....	L. Mann	27,916
Troughs, Eave, Making	L. Pierson	28,901
Trucks for fire ladders.....	G. B. Mickle and J. M. Carville	27,820
Trucks, Hand	J. Underkoffler	28,024
Trucks for locomotives.....	D. R. Pratt	30,421
Trunks.....	E. A. G. Roulstone	27,476
Trunks.....	S. Bourne, Jr.....	29,458
Trusses	H. Dalton	28,972
Trusses, Belt	J. C. Rainbow.....	29,403
Trusses, Hernial, construction of	L. B. White.....	29,737
Trusses, Hernial, Spring	D. L. D. Sheldon	29,410
Truss Bridges, Plates for securing the chords, braces, &c., of.	F. C. Lowthrop	27,457
Truss Girders, Iron	W. Murphy	28,240
Tubes, Boiler, Drawing	S. J. Perry	29,715
Tubes, Gas, Flexible.....	J. Butler	28,647
Tubes, Gas, Flexible, Manufacture of.....	T. J. Mayall.....	29,898
Tubes, Making	S. J. Hayes	28,479
Tubes, Metallic, Galvanoplastic Coating for the interior of.	J. Mathews, Jr.....	28,590
Tubes, Oesophagus	N. Q. Munger	29,092
Tubes, Seamless, forming	C. E. L. Holmes.....	29,276
Tubes for spinning frames.....	D. D. Allen..	29,451
Tubs, Bathing, India rubber, Portable.....	J. W. Ramsay and D. Wilson	29,914
Tubs, Distiller's mash.....	D. P. Patterson.....	29,713
Tuck and plait folders.....	R. Brady	29,855
Tufted work, Manufacture of.....	E. Kellermann	27,133
Tumblers, &c., Apparatus for cleaning.....	T. S. Harris	27,286
Tunnels, Tubular, Sub-marine.....	A. Folsom.....	26,665
Turning Machines	G. Rugg	30,646
Turning ovals	J. S. Barber	29,852
Turnouts, Street railroad.....	H. Tupper	30,940
Tuyeres	C. H. Thompson.....	27,089
Tuyeres	A. Ordway.....	28,296
Tuyeres	M. Mead.....	28,680
Tuyeres	S. V. Folman and N. F. Blodget.....	29,114
Tuyeres	C. H. Edwards	30,805
Twine holders	T. W. Brown	27,101
Type Metal, Coating, with brass.....	J. Corduan	29,144
Types, Embossed, casting	J. C. Bryant.....	30,293
Type Scouring, Machines for.....	J. G. Pavyer.....	28,899
Type Setting	H. Harger.....	28,857
Type Setting	D. B. Dorsey and E. Mathers.....	30,211
Type Setting, Machines for	C. W. Felt.....	28,463
Typography.....	J. Collignon and L. George	28,702
U.		
Umbrellas	J. P. Schenkl.....	29,721
Umbrella Sticks, Preparing wood for.....	J. Ball	29,851
Uterine supporters	G. Kleinworke	30,410
V.		
Valves	J. and C. B. Hardwick.....	30,815
Valves, Alarm, for steam boilers.....	S. Dustin.....	28,165
Valves, Balance Slide.....	J. Sloan.....	27,011
Valves, Combined Pressure and Vacuum, for steam boilers.	D. R. Prindle.....	29,004

Invention or Discovery.	Name of Patentee.	Number.
Valves, Cut-off, for steam engines.....	G. Frost.....	30,138
Valves, Governor.....	G. H. Timmerman.....	28,166
Valves, Governor, for steam engines.....	E. Armstrong.....	27,677
Valves, Governor, for steam engines.....	P. L. Weimer.....	27,752
Valves, Governor, for steam engines.....	W. Chambers.....	28,065
Valves, Governor, of steam engines, Actuating.....	P. L. Weimer.....	27,939
Valves, Governor, for steam engines, Operating.....	W. G. Crutchfield ..	27,275
Valves for hydrants.....	M. C. Meigs.....	28,391
Valves for oscillating engines.....	L. W. Langdon.....	30,826
Valves, Oscillating, for steam engines.....	G. Burnham.....	30,176
Valves, Pump.....	W. Jeffers.....	27,909
Valves, Safety, to boilers, Spring Balances for.....	C. Graham.....	30,966
Valves, Safety, for steam boilers.....	W. M. Storm.....	28,111
Valves, Slide.....	N. Sutton.....	27,168
Valves, Slide.....	J. Millholland.....	30,150
Valves, Slide.....	J. Randall.....	30,184
Valves, Slide.....	R. C. Bristol.....	30,611
Valves, Slide.....	T. Mahoney.....	30,827
Valves, Slide, for steam engines.....	J. T. Plass.....	27,381
Valves, Slide, for steam engines.....	G. W. Raines.....	27,384
Valves, Slide, for steam engines.....	T. Stewart.....	27,394
Valves, Slide, for steam engines.....	E. M. Lewis.....	28,718
Valves, Slide, for steam engines.....	L. P. Rice.....	29,822
Valves, Slide, of steam engines, arrangement for balancing.	A. Buchanan.....	28,251
Valves, Steam.....	M. Cridge.....	26,654
Valves, Steam.....	L. Bennett.....	28,552
Valves, Steam.....	J. F. Letellier.....	30,485
Valves of Steam Engines.....	G. W. Van Deren.....	30,365
Valves of Steam Engines.....	H. E. Woodford.....	30,550
Valves of Steam Engines, Operating.....	A. J. Laird.....	30,329
Valves of Steam Engines, Operating.....	L. H. Bowman.....	30,956
Valves, Steam Trap.....	J. Avery, Jr.....	27,769
Valves, Stop.....	J. Higginbotham.....	27,801
Valves, Vacuum, for water-heating apparatus.....	J. E. Boyle.....	28,058
Valves, Ventilating, for delivery of fluids.....	W. S. Meade and H. W. Dopp.....	27,230
Valves for water closets.....	J. E. Boyle.....	26,645
Valves for water closets.....	W. S. Carr.....	27,522
Valves for water closets.....	W. S. Carr.....	30,462
Valve Chest for handralic mining.....	M. A. Winham.....	26,740
Valve Gear, Eduction, for steam engines.....	A. Crosby.....	27,432
Valve Gear, Induction, for steam engines.....	A. Crosby.....	27,431
Valve Gear for Steam Engines.....	J. King.....	26,908
Valve Gear for Steam Engines.....	P. Kenney.....	29,604
Valve Gear for Steam Engines.....	P. Louis.....	29,844
Valve Gear for Steam Engines.....	J. J. Gwynn.....	30,676
Valve Gear for Steam Engines.....	J. R. Jacob.....	30,923
Valve Seats of Steam Engines, Planing.....	C. B. Long.....	30,234
Varnish, Mode of Polishing.....	W. R. Bennett and C. Storer.....	28,956
Varnishes.....	G. A. Engelhard.....	27,540
Varnishes.....	A. Sebatier.....	27,833
Vapor, Hydro-carbon, for illuminating.....	W. H. Laubach.....	27,190
Vapor for Medical Purposes, Apparatus for forming.....	J. Gardette and H. Rance.....	26,667
Vapor Apparatus, Hydro-carbon.....	F. S. Pease.....	27,470
Vegetable Slicers.....	S. T. Sandford.....	28,412
Vehicles, Locomotive, for running on ice or water.....	N. Wiard.....	26,960
Vehicles, Running Gear of.....	F. L. Kidder.....	30,482
Vehicles, Velocipede.....	S. W. Barr.....	30,191
Veneers, Chamfering, Machine for.....	G. Williamson.....	29,942
Veneers, Cutting.....	P. Weiler.....	27,326
Veneers, Cutting, Machine for.....	D. Donalds.....	27,893
Veneers, Cutting, Machine for.....	G. Knoch and A. Stoeckel.....	27,991
Veneers, Mosaic.....	O. Heinigke and M. Laemmel.....	28,481
Veneers, Sawing spirally from the log, Machines for..	B. F. and I. T. Barker.....	27,420
Ventilating Apparatus.....	G. B. Clarke.....	27,204
Ventilating Sinks of Water Closets.....	W. G. Mackey.....	26,773
Ventilation of Bulk Windows.....	S. R. Mason.....	26,918
Ventilation of Casks Containing Liquids.....	L. Wilhelm.....	28,798
Ventilation for Hats.....	J. McManus.....	26,692
Ventilation for Hats.....	J. Jenkinson.....	27,985
Ventilation of Railroad Cars.....	E. B. Forbush.....	27,212
Ventilation of Railroad Cars, Apparatus for.....	C. Newcomb.....	30,340
Ventilators.....	G. Colhoun.....	26,967
Ventilators.....	W. Chadwick.....	27,405
Ventilators, Hat.....	J. Pollock.....	27,736
Ventilators, Hat.....	F. H. Bell.....	29,050
Ventilators, Railroad Car.....	A. Hapgood.....	28,365
Ventilators, Railroad Car.....	R. B. Wright.....	30,515
Vermin, Apparatus for Destroying.....	L. Disbrow.....	29,366
Vessels, Centre-board for.....	D. C. Gerard.....	28,979
Vessels, Centre-board, Construction of.....	C. R. Ketchum and W. L. Hunt.....	29,085
Vessels, Construction of.....	T. Bell.....	27,328
Vinegar, Machine for Manufacture of.....	F. M. Ruschhaupt.....	29,407

Invention or Discovery.	Name of Patentee.	Number.
Vinegar, Manufacture of.....	J. Palmer.....	29,550
Vise.....	T. B. Lamb.....	28,382
Vise, Engraver's.....	A. H. Wood.....	27,253
Vise Bench.....	L. A. Beardsley.....	27,960
W.		
Wagons.....	N. Jenkins.....	29,598
Wagons, Dumping.....	G. W. Tolhurst and D. E. Sartwell.....	28,216
Wagons, Road.....	James W. Lawrence.....	30,886
Wagons, Shaft Shackle of.....	J. P. Thorp.....	28,114
Walls, Concrete.....	E. E. Clark.....	27,970
Walls, Concrete, Apparatus for building.....	E. E. Clark.....	27,692
Walls, Concrete, Construction of.....	S. T. Fowler.....	28,069
Warming Apparatus.....	J. H. Davis.....	29,364
Warming Apparatus.....	L. A. Colbert.....	30,614
Warming Apparatus, Regulating fire for.....	J. Brown and C. R. Ellis.....	27,687
Warp Dressing Machines.....	R. Pilson.....	30,543
Wash Benches, Extension.....	S. Wiswall.....	30,371
Wash Boards.....	E. Hatfield.....	27,800
Wash Boards.....	J. Keech.....	27,811
Wash Boards.....	J. Cook.....	28,629
Wash Boards.....	A. Hoagland.....	29,972
Wash Stands, Fountain.....	J. R. Ender.....	29,476
Washers to Tacks, Applying, Machines for.....	J. G. Howard.....	29,595
Washing Machines.....	J. S. Gray.....	26,735
Washing Machines.....	A. and D. Schultz.....	26,790
Washing Machines.....	J. M. Kerm.....	26,996
Washing Machines.....	F. Ayres.....	27,031
Washing Machines.....	A. A. Washburn.....	27,249
Washing Machines.....	L. D. Hunt, G. R. Shippey, and B. B. Hawse.....	27,292
Washing Machines.....	G. W. Phenix.....	27,380
Washing Machines.....	H. E. Smith.....	27,391
Washing Machines.....	A. Dean.....	27,533
Washing Machines.....	G. Walker.....	27,584
Washing Machines.....	R. McCain.....	27,643
Washing Machines.....	J. Johnson.....	27,809
Washing Machines.....	J. M. Patterson and J. F. Morrell.....	27,825
Washing Machines.....	D. P. Sharp and L. Mood.....	27,836
Washing Machines.....	B. B. Westcott.....	27,849
Washing Machines.....	H. C. Smith.....	27,870
Washing Machines.....	C. K. Williams.....	27,942
Washing Machines.....	G. W. Tolhurst.....	28,021
Washing Machines.....	C. L. Ingraham and E. Rounds.....	28,180
Washing Machines.....	E. D. Thomas.....	28,215
Washing Machines.....	J. S. Pond.....	28,302
Washing Machines.....	J. F. Pond.....	28,404
Washing Machines.....	C. Roberts.....	28,409
Washing Machines.....	M. Richardson.....	28,442
Washing Machines.....	A. Leightseiser.....	28,494
Washing Machines.....	S. W. Woodward.....	28,529
Washing Machines.....	H., J. H., and H. H. Ehrman.....	28,566
Washing Machines.....	J. W. Crane, Jr.....	28,659
Washing Machines.....	P. Z. Allen.....	28,821
Washing Machines.....	S. T. Vallett.....	29,021
Washing Machines.....	J. Contrell.....	29,121
Washing Machines.....	W. Gowen.....	29,160
Washing Machines.....	A. B. Harlan.....	29,165
Washing Machines.....	J. S. Davis.....	29,574
Washing Machines.....	A. Threlkeld.....	29,638
Washing Machines.....	S. T. and D. Adams.....	29,655
Washing Machines.....	R. B. Huguenin and G. W. Whitney.....	29,697
Washing Machines.....	N. A. Patterson and W. L. Ramsey.....	29,714
Washing Machines.....	S. Hunt.....	29,791
Washing Machines.....	H. E. Smith.....	29,830
Washing Machines.....	C. D. and S. M. Ober.....	29,987
Washing Machines.....	W. Schafer.....	30,001
Washing Machines.....	S. W. Mudge.....	30,081
Washing Machines.....	W. Phelps and C. Wright.....	30,244
Washing Machines.....	A. F. Lapham.....	30,331
Washing Machines.....	J. Gray.....	30,375
Washing Machines.....	S. T. Lamb.....	30,412
Washing Machines.....	J. B. Coffin.....	30,464
Washing Machines.....	C. F. Chambers.....	30,562
Washing Machines.....	S. Ellis.....	30,570
Washing Machines.....	A. Seamans.....	30,705
Washing Machines.....	P. D. Van Hoesen.....	30,998
Washing Machines.....	D. P. Shope.....	31,004
Watches.....	N. P. Strattan.....	26,715
Watches.....	J. Gordon.....	27,281
Watches.....	O. H. Woodworth.....	29,210
Watches.....	E. G. Elliott.....	29,959

Invention or Discovery.	Name of Patentee.	Number.
Watches	G. P. Reed	30,247
Watches, constructing Rims for	C. W. Clewley	28,737
Watches, Regulating	A. L. Dennison	30,873
Watches, Winding, Method of	N. P. Stratton	30,772
Watch Ribbons, Slides for	A. H. Hews	30,969
Water, Apparatus for Drawing	D. E. Teal	30,776
Water, Cooling, Method of	T. Byrne	29,056
Water, Elevating, Apparatus for	L. Wentworth	30,848
Water, Elevating and Delivering from Wells	J. Daykin	29,677
Water, Elevating, from Wells, &c.	S. and A. Aldrich	30,449
Water, Hoisting, Apparatus for	H. Waterman	27,400
Water, Hot, Apparatus for	J. F. Hunter	27,670
Water, Pumping, Wind Machine for	F. G. Johnson	27,758
Water, Raising	L. Gillett	26,843
Water, Raising	H. B. Barker	27,027
Water, Raising, Apparatus for	J. D. Squires	30,893
Water, Raising from Wells, &c.	J. Lee	30,070
Water, Sea, Distilling	G. S. G. Spence	29,015
Water Apparatus, Hot	H. Humphreyville, Jr.	29,267
Water Backs for Ranges, &c.	W. S. Mayo	28,096
Water Carts	H. Austen	30,710
Water Closets	J. Edelman	26,944
Water Closets	J. Keane	26,995
Water Closets	F. Grundy	28,853
Water Closets	E. Hidden	29,278
Water Drawers	A. A. Hotchkiss	30,879
Water Elevators	J. Aldrich	27,765
Water Elevators	M. Wappich	28,526
Water Elevators	J. Champlin	28,832
Water Elevators	H. Nash	29,511
Water Elevators	D. Johnston	30,631
Water Elevators	E. S. Taylor and H. S. Larnard ..	30,894
Water from Cisterns, Regulating the Flow of, Apparatus for ..	C. Worden	29,742
Water in Pipes, Regulating the Pressure of	J. Stratton	28,616
Water to Buildings, Supplying	T. Hanson	27,218
Wax, Substitute for	C. Morfit	26,697
Water from Wells, Apparatus for Drawing	E. Andrus	30,608
Water from Wells, Apparatus for Drawing	G. D. Colton	30,616
Water from Wells, Apparatus for Drawing	H. F. Phillips	30,657
Water from Wells, Elevating	G. W. Billings and W. M. Hutton ..	28,342
Water from Wells, &c., Elevating	J. McArthur	30,490
Water from Wells, Elevating and Delivering	J. W. Wheeler	26,870
Weather Strips for Doors, &c.	P. Leach	27,549
Weighing Apparatus	E. P. Furlong and T. Leavitt ..	26,757
Weighing and Hoisting Machines	J. L. Dutton, Sr.	27,623
Weights, Moving Heavy, Apparatus for	J. Quetil	27,067
Wheels, Car	S. P. Smith	28,512
Wheels, Car	W. Youmans	29,537
Wheels, Car	N. K. Wade and J. Kaye	29,927
Wheels, Car	G. S. Bosworth	30,458
Wheels, Carriage	D. A. Johnson and F. M. Gibson ..	30,479
Wheels, Carriage	J. P. Fisher	30,915
Wheels, Cast Iron, Moulding	G. S. Bosworth	30,525
Wheels, Emery, Making	J. D. Alvord	30,189
Wheels for Flying Artillery Carriages	J. D. Murphy	27,733
Wheels, Guide, for Locomotives	S. Norris	28,007
Wheels for Gun Carriages, &c.	C. F. Brown	29,055
Wheels, Hand Spinning	C. Matheny	27,059
Wheels, Hoisting, Operating	J. W. McMurtry	27,760
Wheels, Paddle	E. Haight	26,984
Wheels, Paddle	H. B. Fay	27,042
Wheels, Paddle	G. Collyer and A. H. Patterson ..	27,618
Wheels, Paddle	R. Germain	27,794
Wheels, Paddle, Fastening	E. Reid	29,819
Wheels, Paddle, Feathering	W. L. R. Mattason	27,499
Wheels, Paddle, Feathering	R. Williams and S. Wilson	28,707
Wheels, Paddle, Feathering	B. Densmon	30,804
Wheels, Paddle, Feathering	D. K. Peoples	30,087
Wheels, Paddle, Stern	W. Smith	26,821
Wheels, Railroad Car	W. W. Spafford	27,163
Wheels, Railroad Car	J. H. Steiner	28,816
Wheels, Railroad Car	C. T. Liernur	27,915
Wheels and Rails, Railroad, testing the wear of	A. Warren and E. Damon, Jr.	28,622
Wheels, Turbine, hanging	T. C. Hendry	29,546
Wheels for vehicles	V. M. Baker	26,826
Wheels, Water	H. H. Richardson	26,928
Wheels, Water	P. H. Roots	27,239
Wheels, Water	W. W. Horton	27,448
Wheels, Water	J. Muller	27,557
Wheels, Water	L. Gibson	28,073
Wheels, Water	G. H. Jones and J. Brown	28,138
Wheels, Water	A. M. Swain	28,314

Invention or Discovery.	Name of Patentee.	Number.
Wheels, Water.....	A. Morehouse	28,682
Wheels, Water.....	C. Bond.....	28,826
Wheels, Water.....	J. Martin.....	28,992
Wheels, Water.....	J. Closs, and I. N. Pyle	29,060
Wheels, Water.....	H. Fellows	29,261
Wheels, Water.....	J. M. Perkins.....	29,305
Wheels, Water.....	J. W. Trouax	29,333
Wheels, Water.....	J. Blocher.....	29,457
Wheels, Water.....	A. Lind	29,501
Wheels, Water.....	H. G. Nelson	29,810
Wheels, Water.....	J. J. Watson	30,274
Wheels, Water.....	E. F. M. Fletcher.....	30,916
Wheels, Water.....	J. Crissy	30,960
Wheels, Water.....	N. Johnson.....	30,971
Wheels, Water, Horizontal	R. Ross.....	27,673
Wheels, Water, Turbine	B. Stetson.....	29,654
Wheels, Wind.....	C. C. Bomberger.....	27,423
Wheels, Wind, regulating.....	W. D. Walker.....	27,325
Whiffletrees, Clevis for attaching, to vehicles.....	L. S. Taylor.....	26,936
Whiffletrees, Detachable, for vehicles.....	I. Ramminger.....	29,193
Whiffletrees, to sleighs, attaching.....	A. P. Hutchinson.....	28,866
Whiffletrees, Self-detaching	L. D. Bowker	27,884
Whiffletrees, for vehicles, Self-detachable.....	M. C. Chamberlin.....	29,952
Windlass	S. L. Avery	28,141
Windlass, Ships'	A. I. Gove.....	28,716
Windlass, Ships' Vertical.....	C. Perley.....	29,990
Windlass Capstans.....	S. P. Patten	30,607
Window Fasteners.....	E. M. Judd	30,408
Window Frames, Adjustable Stops for	M. Howland.....	27,544
Window Gratings for prisons	E. May	28,496
Window Net and Sash, Combined.....	I. Wiswell	30,370
Window Screens	L. L. Reynolds	27,473
Window Washers	J. Middleton.....	29,805
Windows, Apparatus for cleaning	G. Munce	29,396
Willow Peelers.....	J. M. Wood	29,535
Winnowers, Grain.....	H. H. Beach.....	26,742
Winnowing Machine	F. H. Manny	30,334
Wires, Friction, making.....	D. J. Ferry	29,259
Wires, Steel and Iron, rolling	J. Wright	30,782
Wood, bending, Machines for	A. Rogers	27,568
Wood, bending, Machines for	C. L. Nelson and O. Bostwick.....	27,672
Wood, bending, Machines for	F. Seidle and S. Eberly	29,107
Wood, bending, Machines for	A. P. Spaulding and E. Pierce.....	30,004
Wood, bending, Machines for	D. B. Hedden	30,404
Wood, bundling	W. S. Williams.....	28,243
Wood, Fire, bundling	C. J. Hobe.....	28,753
Wood and metal, finishing works in	G. Storer	28,818
Wood, polishing, Machines for	G. Munger.....	27,953
Wood, preparing and moulding into different forms	P. Shaw.....	28,309
Wood Slivers, Machines for reducing	W. H. Noyes	27,597
Wooden Ware, making	A. Howard, Jr.	27,803
Wool, burring	E. I. McCarthy	26,775
Wool, removal of burs from	C. L. Harding	28,476
Woolen Rovings, Machines for winding.....	J. A. Chapman	30,958
Wrenches	I. E. Niell.....	26,951
Wrenches	A. C. Richard	27,090
Wrenches	G. B. Phillips.....	28,300
Wrenches	A. I. Gove.....	28,665
Wrenches	R. P. Butties	28,964
Wrenches	E. S. Scripture	29,826
Wrenches	W. Kearney	30,579
Wrenches	F. W. Kroeber.....	30,975
Wrenches	E. Ripley.....	30,987
Wrenches	E. Ripley.....	29,620
Wrenches and Pincers	I. H. Doolittle	27,622
Wrenches, Pipe.....	W. F. Beecher	28,053
Wrenches, Pipe.....	G. C. Taft.....	30,431
Wrenches, Screw.....	L. and A. G. Coes	29,360
Wrenches, Screw, Machines for heading.....	L. and A. G. Coes	28,157
Wrenches, Screw, Rolling Shanks and Bars of.....	W. Russells	29,623
Wrenches and Vises.....	P. D. Van Hoesen	30,268
Wrenches, Wagon.....	S. A. Bailey.....	27,609
Wringing Machines.....	C. S. Schmidt	30,159
Wringers, Mop		
Y.		
Yards, attachment of, to top-masts.....	S. Hall	28,354
Yarns, manufacture of	F. Vouillon and F. Tavernier.....	27,014
Yarns, spinning, Machinery for	J. E. Crowell.....	28,161
Yarns, spinning, Machinery for	E. Victory.....	28,220
Yarns and Threads, manufacture of.....	S. M. Allen.....	27,877
Yokes, Ox, Fastenings.....	W. N. Lockwood.....	28,384
Yoxes, Ox, Pins for fastening bows in	J. Warner and T. C. Silliman	29,207

Invention or Discovery.	Name of Patentee.	Number.
Z.		
Zinc, Oxide of, Apparatus for manufacturing	I. M. Milbank	27,142

REISSUES, 1860.

Invention or Discovery.	Name of Patentee.	Number.
A.		
Alarm, Burglars	E. Brown	924
Alarm, Burglars	T. A. Requa	964
B.		
Bands, Wrought Iron, contracting the circumference of.	C. L. Crowell and Robt. Smith	887
Bands, Wrought Iron, contracting the circumference of.	C. L. Crowell and Robt. Smith	888
Bed Bottoms	Tyler Howe	884
Bed Bottoms, Spring	Philip Ulmer	929
Bedsteads, Folding	T. B. Bleecker	1,015
Bedsteads, Folding	J. B. Wickersham	1,101
Bedsteads, Folding	J. B. Wickersham	1,102
Bells, Hanging	G. W. Hidreth	955
Boiler Feeder, Automatic	L. B. Hunt	946
Bonnets, Bonnet Frames, &c., pressing	Mary J. Osborn	933
Bonnet Frames	W. E. Kidd	959
C.		
Caoutchouc, Manufacture of	Chas. Goodyear	1,084
Caoutchouc, Preparing	Chas. Goodyear	1,085
Carpet Sweeper	H. H. Herrick	1,079
Cars, Railroad	S. J. Seely	1,055
Cars, Sleeping	Eli Wheeler	1,043
Chain Machine	Lawriston Towne	928
Chairs, Railroad	D. W. Crocker	922
Cloth, Machine for Drying	B. Sexton	1,050
Coffins	J. G. Forbes and R. Squires	919
Cooking Ranges	H. H. Stimpson	956
Copying Apparatus, Portable	Wm. Van Ander	1,100
Cordage, Manufacturing	Wm. Joslin	1,048
Corn Huskers	David M. Mefford	962
Corn Sheller	N. Drake	980
Corn Sheller	Jas. J. Johnston	1,096
Coupling Pole for Railroad Cars	B. E. Sampson	906
Curtain Fixtures	Lewis White	965
Cutter, Hemp	Wm. N. Whitely, Jr.	1,077
Cutter, Straw	Warren Gale	938
D.		
Door Plates	Jer. W. Bliss	1,066
Dresses, Ladies, Frame for	J. R. Palmenberg	894
E.		
Egg Beater	E. P. Monroe	1,062
Engines, Air	P. Shaw	1,014
Engines, Air	Stephen Wilcox, Jr.	1,082
Engines, Air	Stephen Wilcox, Jr.	1,083
Excavator, Manure	A. R. Hurst	939
F.		
Faucets	Jas. Powell	905
Fences, Portable, uniting the Panels of	C. Van De Mark	1,006
Fire Arms, Breech-loading	Edward Lindner	1,053
Fire Arms, Breech-loading	Edward Lindner	1,054
Fire Arms, Revolving	H. Smith and D. B. Wesson	1,059
Fire Arms, Trigger-operating Revolving	Jas. M. Cooper	1,029
Flouring Mill	D. S. Wagener	930
Furnace for Evaporating Sugar Juices	L. Lefebvre	931
Furnace, Air Heating	Walter Bryant	934
G.		
Gas Regulator	Wm. Mallerd	932
Gas Regulator	Salmon Bidwell	1,018

Invention or Discovery.	Name of Patentee.	Number.
Gas, Heating or Cooking by	W. F. Shaw.....	968
Gas, Illuminating, production of	J. M. Sanders	936
Gases, Naphthalizing	E. H. Ashcroft.....	1,024
Glass Stoppers for Bottles, &c.....	T. R. Hartell	949
Glass, Manufacture of Flint	H. Trumbull	1,081
Grain Separator.....	Jona. L. Booth	1,045
Grain Separators and Cleaners.....	Wm. M. Arnall.....	1,000
Grain Separators, Shoe for.....	Hiram Aldridge.....	1,017
Grass, Machine for Cutting	C. H. McCormick.....	976
Grass, Machine for Cutting	C. H. McCormick.....	977
Grass, &c., Machine for Cutting	C. H. McCormick.....	975
H.		
Handles, Hair Brush, finishing.....	Thos. Mitchell	885
Handles, Hair Brush, finishing.....	Thos. Mitchell	990
Harvesters.....	Pells Manny.....	935
Harvesters.....	C. R. Brinckerhoff.....	966
Harvesters.....	S. W. Tyler	1,076
Harvesters and Binders	Hy. Baldwin, Jr	998
Harvesters and Binders	Hy. Baldwin, Jr	999
Harvesters, Clover and Grass.....	W. N. Whitely, Jr.....	985
Harvesters, Clover and Grass.....	W. N. Whitely, Jr.....	986
Harvesters, Clover and Grass.....	W. N. Whitely, Jr.....	987
Harvesters, Grain and Grass.....	C. Aultman, L. Miller, T. R. Tonner, J. Miller, and Geo. Cook.	951
Harvesters, Grain and Grass.....	C. Aultman, L. Miller, T. R. Tonner, J. Miller, and Geo. Cook.	952
Harvesters, Grain and Grass.....	J. Swartz	970
Harvesters, Grain and Grass.....	C. Wheeler, Jr.....	875
Harvesters, Grain and Grass.....	C. Wheeler, Jr.....	876
Harvesters, Grain and Grass.....	C. Wheeler, Jr.....	877
Harvesters, Grain and Grass.....	C. Wheeler, Jr.....	878
Harvesters, Grain and Grass.....	C. Wheeler, Jr.....	879
Harvesters, Grain and Grass.....	C. Wheeler, Jr.....	880
Harvesters, Grain and Grass.....	C. Wheeler, Jr.....	881
Harvesters, Grain and Grass.....	C. Wheeler, Jr.....	971
Harvesters, Grain and Grass.....	Jesse Urmey.....	882
Harvesters, Grain and Grass.....	Jesse Urmey.....	883
Hats, ventilation of	John McMannus.....	927
Hat Bodies, making	Alba B. Taylor	1,030
Hat Bodies, making	H. A. Burr	1,087
Hat Bodies, manufacturing.....	H. A. Burr	1,086
Hay Making Machine.....	J. C. Stoddard	1,042
Horse Powers, Endless Chain	Geo. Westinghouse.....	900
Hose Pipe, coating	B. F. Lee.....	969
Hubs, Wheel, casting Boxes for	T., Wm. A., and A. D. Ellis.....	950
I.		
Ice, Hoisting and Storing.....	H. Van Steenburg and J. Egnor	1,069
India Rubber, Hard	Thomas J. Mayall.....	1,090
India Rubber, Vulcanizing	J. T. Trotter.....	988
K.		
Kettles, Cast Iron, Grinding the inner Surfaces of.....	C. C. Bradley, Jr.....	954
Knitting Machine.....	Jonas B. Aiken	926
Knitting Machine.....	Clark Tompkins.....	948
Knitting Machine.....	C. Tompkins and J. Johnson.....	963
L.		
Lamp	M. A. Deitz	1,032
Lamp	Wm. Fulton.....	1,047
Lamp, Vapor	A. M. Mace	1,034
Lamp Shades.....	Chas. and Anna C. Wilhelm	1,025
Leather Goods, Water Proof.....	S. La Forge	961
Legs, Artificial	Douglas Bly.....	994
Lenses, Fluid.....	S. Kakales	989
Life Preservers, attaching, to Vests	R. L. Nelson	893
Locks	Thos. L. Pye.....	1,063
Loom for Weaving Figured Fabrics.....	Moses Marshall.....	947
Lubricating Compound.....	J. B. McMunn	1,080
Lumber, planing out, of Wood.....	S. S. Gray and S. A. Woods.....	945
M.		
Matrices, &c., Constructing	J. J. C. Smith.....	943
Mills, Circular Saw.....	N. G. Norcross	1,002
Mouldings, Enamelling.....	Robt. Marcher.....	940
Mowing Machine	Geo. C. Dolph	904
Mowing Machine	Eph. Ball	1,007

Invention or Discovery.	Name of Patentee.	Number.
Mowing Machine	Eph. Ball	1,008
Mowing Machine	Eph. Ball	1,009
Mowing Machine	Eph. Ball	1,010
Mowing Machine	Eph. Ball	1,011
Mowing Machine	Eph. Ball	1,012
Mowing Machine	Eph. Ball	1,013
N.		
Nails, Horse Shoe, Machine for making.....	Amos Whittemore.....	1,060
Needle Case and Index.	C. D. Wheeler	1,064
Nut Machine	R. H. Cole.....	902
Nuts, making.....	R. H. Cole.....	901
O.		
Oil Cloths, printing	James Albro	992
Oil Cloths, printing	James Albro	993
Ores, heating	A. C. Vandyke	1,052
Ovens, Bakers'	H. Berdan.....	1,035
P.		
Paper, feeding, to Printing Presses.....	G. H. and Sylvester Ferguson	1,046
Paper, Machine for folding.....	George K. Snow	941
Paper Bags, making.....	B. F. Rice.....	920
Paper Bags, making.....	E. W. Goodall.....	1,033
Paper and other Fabrics, Machine for drying	Ed. L. Perkins.....	1,056
Paper Pulp, grinding and sizing.....	J. Jordan, H. Keney, Grant, Warren & Co.	1,088
Paper Pulp, manufacture of	G. Howland and J. B. Palser	996
Paper Pulp, manufacture of	G. Howland and J. B. Palser	997
Pavement, Cellular Iron.....	S. H. Titus and O. Des Granges.....	957
Percussion Seeders	J. R. Rogers	1,057
Photographic Baths	B. Hufnagle.....	1,074
Photolithography	J. A. Cutting and L. H. Bradford.....	1,019
Piles, staying, for Wharves, Piers, &c	E. H. Angamar	925
Plate Holders for Cameras.....	A. S. Southworth.....	1,049
Planters, Seed.....	George W. Brown	1,036
Planters, Seed.....	George W. Brown	1,037
Planters, Seed.....	George W. Brown	1,038
Planters, Seed.....	George W. Brown	1,039
Planters, Seed.....	George W. Brown	1,040
Planters, Seed.....	George W. Brown	1,091
Planters, Seed.....	George W. Brown	1,092
Planters, Seed.....	George W. Brown	1,093
Planters, Seed.....	George W. Brown	1,094
Planters, Seed.....	George W. Brown	1,095
Plough, Gang.....	Hy. Cowing	1,041
Plug, Fire	Joseph H. Lowry	1,096
Preserve Cans	Carlton Newman.....	1,105
Press, Printing.....	George P. Gordon.....	1,021
Press, Printing.....	George P. Gordon.....	1,022
Projectiles.....	Charles T. James	1,098
Provisions, curing	D. E. Somes.....	1,097
R.		
Railroad Frogs.....	James M. Dick	903
Rakes, Harvesting.....	Owen Dorsey.....	1,067
Raking attachment to Harvesters.....	D. S. Morgan	1,104
Reaping Machine	Obad Hussey	917
Reaping Machine	W. H. Seymour	1,003
Reaping Machine	W. H. Seymour	1,004
Reaping Machine	W. H. Seymour	1,005
Reaping and Mowing Machine	J. J. Whitaker and C. D. Read.....	896
Reaping and Mowing Machine	J. J. Whitaker and C. D. Read.....	897
Reaping and Mowing Machine	J. J. Whitaker and C. D. Read.....	898
Reaping and Mowing Machine	J. J. Whitaker and C. D. Read.....	899
Reaping and Mowing Machine	C. H. McCormick.....	972
Reaping and Mowing Machine	C. H. McCormick.....	973
Reaping and Mowing Machine	C. H. McCormick.....	974
Reflector, Night Light.....	John Wyberd.....	982
Refrigerator	Benjamin M. Nyce.....	1,068
Roofing Composition.....	Hy. Lester.....	1,044
Roofs, Sheet Metal, seaming.....	Lucian Fay.....	889
S.		
Safes, Fire-proof.....	E. Hall and Joseph L. Hall.....	923
Saws, Machine for grinding	H. R. Burger.....	1,061
Seeding Machine	A. E. Bonham	1,001
Sewing Machine.....	Robert M. Berry.....	1,073
Shoes, Wooden soled	Hy. Wright	1,023

Invention or Discovery.	Name of Patentee.	Number.
Skates	N. C. Sanford.....	895
Skates	W. Scarlett.....	1,075
Skirts, Skeleton Hoop.....	Cæsar Neuman	991
Springs for Railroad Cars and Carriages.....	P. G. Gardiner.....	981
Steam Boilers	L. Lefebvre	1,065
Steam Boilers, Alarm for, low water.....	Selah Dustin.....	937
Steam Boilers, Feed Water Apparatus for.....	George W. Rains	1,016
Steam Boilers, preventing incrustation of	H. F. Knoderer and L. F. Knoderer.....	960
Steam Boilers, Safety Apparatus for	Timothy Clark.....	1,031
Steam Engine	F. E. Sickels	907
Steam Engine	F. E. Sickels	908
Steam Engine	F. E. Sickels	909
Steam Engine	F. E. Sickels	910
Steam Engine	F. E. Sickels	911
Steam Engine	F. E. Sickels	912
Steering Apparatus	William Goodsoe	983
Steering Apparatus	Catherine Muller Hunt.....	1,089
Stereoscopic Pictures, exhibiting.....	Alexander Beckers.....	890
Stitches by Machinery, forming.....	Allen B. Wilson.....	913
Stitches by Machinery, forming	Allen B. Wilson	914
Stockings, knitting.....	D. A. Hays	915
Stockings, knitting.....	D. A. Hays	916
Stones, raising and transporting.....	Sol. E. Bolles.....	1,070
Stoves	P. N. Burke	1,027
Stoves, Coal.....	C. Eddy and J. Shavor	944
Stoves, Coal.....	C. Eddy and J. Shavor	958
Stoves, Coal.....	C. Eddy and J. Shavor	1,078
Sugar, Loaf, Machine for cutting	A. Brown and F. Brown	953
Sugar Mould Carriages.....	C. E. Bertrand.....	967
T.		
Threshing Machine	Spencer Moore	1,099
Time Keepers, Regulator for.....	R. S. Mershon and J. M. Harper.....	892
V.		
Valve, Regulator, for Steam Engine.....	N. C. Travis, N. Johnson, and R. Emerson.....	1,051
Valves, Slide, for Steam Engine.....	R. C. Bristol.....	891
Valve for Steam Engines.....	Addison Crosby.....	921
Valve Cocks, governing the action of	F. H. Bartholomew	1,071
Valve Cocks, governing the action of	F. H. Bartholomew	1,072
W.		
Waxing Machine	W. H. Tambling	886
Water Closet	William S. Carr.....	978
Water from Wells, elevating and delivering	John W. Wheeler	1,028
Wheel, Water.....	P. H. Roots.....	918
Wheel, Water.....	J. D. Collins.....	979
Wheels, Paddle, to Canal Boats	Reuben Jane.....	995
Windlass, Ship's	William H. Gilmore.....	1,020
Window Stop	Turner Williams.....	984
Wrench, Screw.....	Aury G. Coes.....	874

DESIGNS, 1860.

Invention or Discovery.	Name of Patentee.	Number.
A.		
Andirons.....	Samuel Boyd.....	1,216
Andirons.....	Samuel Boyd.....	1,217
B.		
Bedsteads	P. C. Cambridge, Jr.....	1,190
Bust of Abraham Lincoln.....	Leonard W. Volk.....	1,250
C.		
Carpets	David McNair	1,226
Carpets	Francis L. Pierce.....	1,228
Carpets	E. J. Ney.....	1,321
Carpets	E. J. Ney.....	1,353
Carpets	E. J. Ney.....	1,354
Carpets	E. J. Ney.....	1,355

Invention or Discovery.	Name of Patentee.	Number.
Carpets	E. J. Ney	1,356
Carpets	E. J. Ney	1,357
Carpets	E. J. Ney	1,358
Carpets	E. J. Ney	1,359
Carpets	E. J. Ney	1,360
Carpets	E. J. Ney	1,361
Carpeting, &c.	Henry G. Thompson	1,324
Carpeting, &c.	Henry G. Thompson	1,325
Carpeting, &c.	Henry G. Thompson	1,326
Carpeting, &c.	Henry G. Thompson	1,327
Carpeting, &c.	Henry G. Thompson	1,328
Carpeting, &c.	Henry G. Thompson	1,329
Carpeting, &c.	Henry G. Thompson	1,330
Carpeting, &c.	Henry G. Thompson	1,331
Carpeting, &c.	Henry G. Thompson	1,332
Carpeting, &c.	Henry G. Thompson	1,333
Carpeting, &c.	Henry G. Thompson	1,334
Carpeting, &c.	Henry G. Thompson	1,335
Carpet Patterns	Henry G. Thompson	1,195
Carpet Patterns	Henry G. Thompson	1,196
Carpet Patterns	E. J. Ney	1,199
Carpet Patterns	E. J. Ney	1,209
Carpet Patterns	E. J. Ney	1,210
Carpet Patterns	E. J. Ney	1,253
Carpet Patterns	E. J. Ney	1,254
Carpet Patterns	Henry G. Thompson	1,264
Carpet Patterns	Henry G. Thompson	1,265
Carpet Patterns	Henry G. Thompson	1,266
Carpet Patterns	Henry G. Thompson	1,267
Carpet Patterns	Henry G. Thompson	1,268
Carpet Patterns	Henry G. Thompson	1,269
Carpet Patterns	Henry G. Thompson	1,270
Carpet Patterns	Henry G. Thompson	1,271
Carpet Patterns	Henry G. Thompson	1,272
Carpet Patterns	Henry G. Thompson	1,273
Carpet Patterns	Henry G. Thompson	1,274
Carpet Patterns	Henry G. Thompson	1,275
Carpet Patterns	E. J. Ney	1,299
Carpet Patterns	E. J. Ney	1,300
Carpet Patterns	E. J. Ney	1,301
Carpet Patterns	Henry G. Thompson	1,302
Carpet Patterns	Henry G. Thompson	1,303
Carpet Patterns	Henry G. Thompson	1,304
Carpet Patterns	Henry G. Thompson	1,305
Carpet Patterns	Henry G. Thompson	1,306
Carpet Patterns	Henry G. Thompson	1,307
Carpet Patterns	Henry G. Thompson	1,308
Carpet Patterns	Henry G. Thompson	1,309
Centre Pieces	Henry Berger	1,318
Coffins	J. C. Karr	1,218
Coffins	J. D. Cunningham	1,310
Combs, Back	Abel Gray	1,192
Cook's Range	Gardner Chilson	1,248
Cooking Range	John Martins and James Horton	1,231
Cooking Range	A. C. Barstow	1,247
Cooking Range	A. K. Sanders and N. S. Vedder	1,295
D.		
Decanter Stopper	Wm. Pountney	1,258
Drawer Pull	P. Bradford and J. B. Sargent	1,345
F.		
Fire Dogs	Theodore W. Lillagore	1,189
Fire Dogs	Theodore W. Lillagore	1,194
Fire Dogs	Theodore W. Lillagore	1,220
Fire Dogs	Theodore W. Lillagore	1,221
Fire Dogs	Theodore W. Lillagore	1,222
Fire Dogs	Theodore W. Lillagore	1,223
Fire Dogs	Theodore W. Lillagore	1,224
Fire Dogs	Theodore W. Lillagore	1,225
Floor Cloth	Jer. Meyer	1,234
Floor Cloth	Charles T. Meyer	1,351
Floor Oil Cloth	James Bogle	1,197
Floor Oil Cloth	James Bogle	1,198
Floor Oil Cloth	James Bogle	1,236
G.		
Gridiron	Elnathan Peck	1,287

Invention or Discovery.	Name of Patentee.	Number.
H.		
Handle, Spoon.....	John Polhamus.....	1,232
Handle, Spoon.....	Harry C. Foster.....	1,276
Handles of Spoons, Forks, &c.....	John Polhamus.....	1,342
Handles of Spoons and Forks.....	M. Gibney.....	1,241
Hat, Lady's.....	Eliza A. Murdock.....	1,319
Heater Fronts.....	E. Tompkins.....	1,338
Hub Bands.....	Benjamin S. Pardee.....	1,293
I.		
Ice Pitcher.....	George W. Smith.....	1,219
M.		
Medallion of Washington Irving.....	M. L. Livingston.....	1,311
Medallion of Theodore Parker.....	T. A. Carew.....	1,340
N.		
Nut Cracker.....	Samuel J. Smith.....	1,249
P.		
Paint Cans.....	Washington L. Gilroy.....	1,237
Paint Cans.....	Washington L. Gilroy.....	1,238
Paint Cans.....	Washington L. Gilroy.....	1,239
Paint Cans.....	Washington L. Gilroy.....	1,240
Pump.....	Birdsill Holly.....	1,256
Pump, Cistern.....	Birdsill Holly.....	1,193
R.		
Railings, Iron.....	Isaac De Zouche.....	1,205
Roofs, Ornamental Ridge for.....	John L. Jones.....	1,252
S.		
Sad Irons.....	Thomas Loring.....	1,313
Sewing Machines.....	J. E. A. Gibbs.....	1,206
Shovel, Fire.....	Samuel Morgan.....	1,260
Shovel, Fire.....	Samuel Morgan.....	1,261
Shovel, Fire.....	Samuel Morgan.....	1,262
Shovel, Fire.....	Samuel Morgan.....	1,263
Shutter, Iron.....	E. H. Brown.....	1,352
Spoons.....	Alonzo Hebbard.....	1,320
Stamping on lead pencils.....	Joseph Rosenthal.....	1,230
Statuette of Stephen A. Douglas.....	L. W. Volk.....	1,203
Stoves.....	S. W. Gibbs.....	1,188
Stoves.....	Henry S. Hubbell, T. H. Wood, and John E. Roberts.....	1,207
Stoves.....	Wm. H. Smith.....	1,208
Stoves.....	N. S. Vedder.....	1,235
Stoves.....	James Green and R. I. King.....	1,243
Stoves.....	Jacob Reser.....	1,244
Stoves.....	S. W. Gibbs.....	1,251
Stoves.....	Isaac De Zouche.....	1,280
Stoves.....	N. S. Vedder.....	1,312
Stoves.....	G. Smith and H. Brown.....	1,322
Stoves.....	S. H. Sailor and Jacob Steffe.....	1,337
Stoves.....	J. Steffe and S. H. Sailor.....	1,344
Stoves.....	Zeb. Hunt.....	1,347
Stoves.....	Isaac de Zouche.....	1,350
Stoves.....	G. Smith and H. Brown.....	1,362
Stoves, Box, Side Plates of.....	N. S. Vedder and Ezra Ripley.....	1,185
Stoves, Coal.....	David Hathaway.....	1,291
Stoves, Cooking.....	W. W. Stevens.....	1,200
Stoves, Cooking.....	N. S. Vedder.....	1,204
Stoves, Cooking.....	N. S. Vedder.....	1,255
Stoves, Cooking.....	S. H. Ransom.....	1,277
Stoves, Cooking.....	S. H. Ransom.....	1,279
Stoves, Cooking.....	G. Smith and H. Brown.....	1,281
Stoves, Cooking.....	G. Smith and H. Brown.....	1,282
Stoves, Cooking.....	G. Smith and H. Brown.....	1,283
Stoves, Cooking.....	G. Smith and H. Brown.....	1,284
Stoves, Cooking.....	G. Smith and H. Brown.....	1,285
Stoves, Cooking.....	G. Smith and H. Brown.....	1,286
Stoves, Cooking.....	G. Smith and H. Brown.....	1,288
Stoves, Cooking.....	Walter W. Stanard.....	1,289
Stoves, Cooking.....	N. S. Vedder.....	1,294
Stoves, Cooking.....	W. W. Stanard.....	1,296
Stoves, Cooking.....	W. W. Stanard.....	1,298

Invention or Discovery.	Name of Patentee.	Number.
Stoves, Cooking	W. W. Stanard.....	1,316
Stoves, Cooking	W. W. Stanard.....	1,317
Stoves, Cooking	Jacob Steffe	1,363
Stoves, Cooking, Doors of.....	N. S. Vedder and A. Murray	1,184
Stoves, Cooking, Doors of.....	N. S. Vedder	1,187
Stoves, Cooking, Doors of.....	Charles J. Woolson.....	1,348
Stoves, Cooking, Parlor	N. S. Vedder.....	1,339
Stoves, Cooking, Plates of.....	S. W. Gibbs.....	1,212
Stoves, Cooking, Plates of.....	R. H. N. Bates	1,259
Stoves, Cooking, Plates of.....	G. Smith and H. Brown.....	1,323
Stoves, Cylinder, Plates of	J. Horton and J. Martino.....	1,315
Stoves, Door of.....	J. D. Marshbank.....	1,341
Stoves, Parlor.....	N. S. Vedder	1,202
Stoves, Parlor.....	Isaac De Zouche	1,233
Stoves, Parlor.....	Wm. W. Stevens.....	1,246
Stoves, Parlor.....	Louis Meyer.....	1,257
Stoves, Parlor.....	S. H. Ransom	1,278
Stoves, Parlor.....	W. W. Stanard.....	1,297
Stoves, Parlor and Cooking.....	N. S. Vedder	1,201
Stoves, Plates of.....	S. H. Ransom	1,214
Stoves, Plates of.....	Henry S. Hubbell and Thomas H. Wood..	1,243
Stoves, Plates of.....	J. Siddons and James C. Hart	1,245
Stoves, Plates of.....	James Horton and John Martino.....	1,314
Stoves, Plates of.....	C. J. Woolson	1,349
Stoves, Plates of.....	N. S. Vedder and E. Ripley	1,364
Stoves, Plates of.....	N. S. Vedder and W. L. Sanderson.....	1,365
Stoves, Plates of, Cook's.....	N. S. Vedder	1,345
Stoves, Register.....	N. S. Vedder	1,336
Stoves, Side Plates of	N. S. Vedder	1,186
Stoves, Six Plate	David Hathaway.....	1,290
Stoves, Tops and Bases of.....	S. W. Gibbs.....	1,211
T.		
Tea Service	H. G. Reed.....	1,343
Trade Mark	James Meyer, Jr.....	1,183
Trade Mark	Napthalie Ezekial	1,191
Trade Mark	D. L. Meineke	1,292
Trade Mark for lead pencils.....	Joseph Rosenthal	1,229
Trade Mark for neuralgic pills.....	Samuel Armitage.....	1,215
W.		
Water Coolers.....	Charles Müller.....	1,227

ADDITIONAL IMPROVEMENTS, 1860.

Invention or Discovery.	Name of Patentee.	No. of Imp't.	No. of Patent.
A.			
Altitudes of the Sun, taking.....	Frederick Yeiser.....	289	22,913
C.			
Cakes, cutting and panning	John H. Shrote	286	25,767
Churns, operating.....	A. G. Brush.....	261	20,545
Churns	M. L. Bander.....	293	19,117
Clover Hullers.....	Anthony Overocker.....	291	24,657
Coffee Pot....	H. P. Gatchell	276	26,229
Composition to prevent the depredations of Insects.	Frank G. Johnson.....	309	27,673
Corn and Cob Crushers	Amos Glover.....	303	28,571
Coupling for thills to axles.....	James Sadler	308	29,317
Cutters for harvesters	John Gore	277	19,360
Cutting and finishing Shoe Heels	Wm. F. Edson.....	290	25,326
F.			
Fire-Arms, revolving.....	F. D. Newbury.....	278	13,039
Fire-Arms, revolving, (reissue No. 806).....	Josiah Ells.....	265	11,419
Furnace for evaporating sugar juices.....	L. Lefebvre.....	263	22,126
G.			
Governor for steam engines	A. Anderson.....	272	21,056
Grates.....	Joseph Tiberi.....	288	25,352

Invention or Discovery.	Name of Patentee.	No. of Imp't.	No. of Patent.
H.			
Hay, loading	Thos. J. Jolly	296	28,868
L.			
Lamps	G. T. Parkhurst	301	25,438
Lamps, Vapor	Albertus Geiger	294	28,467
M.			
Moulding Machine	E. M. Smith	287	27,261
O.			
Oils, gelatinizing	E. Queru	264	25,277
P.			
Paper and Letter File	J. B. McEnally	300	27,302
Paper and other Fabrics, rendering incorrodible...	T. C. Chase	307	22,015
Piles, Staying for wharves, &c., (reissue No. 925).	E. H. Angamar	270	24,708
Planter, Corn	Wm. C. Banks	295	28,051
Plough	Wm. C. Johnson	299	27,188
Plough	Henry H. Robertson	304	29,104
Primer, Tape, for fire-arms	T. T. S. Laidley	302	22,957
Propeller, Canal Boat	R. Cartwright	274	24,794
Protractor	Josiah Lyman	280	20,356
Pump Packings	W. Race	267	18,705
Q.			
Quartz, &c., crushing	J. C. Dickey	282	28,163
R.			
Refrigerator	Wm. Sims	305	22,897
Roofs for railroad cars	A. P. Winslow	292	25,071
S.			
Seat, spring-back carriage	A. Hulbert and N. Cowles	271	25,725
Seeding Machine	John Huston	269	19,144
Skates, attaching, to Boots	Thos. L. Whitman	283	26,540
Skates, fastenings for	T. P. Castello	266	26,341
Staves, sawing, for the Bolt	H. H. Evarts	268	24,079
Steering Apparatus	Daniel Jones	285	27,223
Stoves	G. J. Kingsbury	297	23,587
T.			
Tenons on Spikes, cutting	Mahlon Gregg	279	19,292
Tile, laying Drain	B. B. Briggs	284	25,624
W.			
Washing Machine	J. F. Pond	273	21,903
Washing Machine	Charity Pendleton	281	24,754
Washing Machine	A. Wilkinson	306	25,542
Watch Key and Guard Bar	D. F. Elmer	298	28,846
Wheel, Water	S. Richardson	262	24,055
Windlasses, Ships'	James Emerson	275	13,506

EXTENSIONS, 1860.

Invention or Discovery.	Name of Patentee.	Number.
A.		
Acids, oleic and stearic, separating	James S. Gwynne	4,735
B.		
Bridge, Truss	Wm. Howe	4,726
C.		
Carving, Machine for	Hezekiah Augur	4,907
Combs, Curry	Wm. Wheeler	4,470

Invention or Discovery.	Name of Patentee.	Number.
D.		
Dredging Machine	D. Carmichael and J. C. Osgood....	4,547
F.		
Feeders for screw machines, (reissue No. 169)....	S. Merrick.....	4,411
H.		
Hat Bodies, (reissue No. 396).....	Charles St. John, H. A. Burr, and others.....	4,472
Hat Bodies, (reissue No. 400).....	Charles St. John, H. A. Burr, and others.....	4,472
Hat Bodies, (reissue No. 538).....	Wm. Foscett.....	4,353
Horse Power	Daniel Cary	4,595
L.		
Legs, Artificial	B. F. Palmer	4,834
Locks, Door.....	J. H. Butterworth.....	4,452
Looms, (reissue No. 454).....	W. W. Dutcher	4,606
M.		
Mills, Saw	Thos. J. Wells	4,456
N.		
Netting Machine.....	John McMullen	4,608
P.		
Plough	John M. May.....	4,493
Presses, Printing, checking the momentum of	A. B. Taylor.....	4,442
R.		
Registers for stoves	Washburn Race	4,443
S.		
Screw Heads, dressing, (reissue No. 645) ...	H. A. Harvey....	4,700
Screws, cutting, (reissue No. 641).....	H. A. Harvey.....	4,548
Screws, Wood, (reissues No. 107 and No. 626)...	Eagle Screw Company	4,704
Sewing Machine	Elias Howe, Jr.....	4,750
Stove	J. H. B. Latrobe.....	4,744
Stove, Cooking	R. D. Granger	4,567
Sugar Pans.....	Alfred Stillman.....	4,519
T.		
Tea Kettles	Ezra Ripley	4,417
Telegraph, Bell, (reissue, No. 127)	T. D. Jackson and A. Judson	4,816
Telegraph, Electro Magnetic.....	S. F. B. Morse.....	4,453
Telegraphs, Magnetic Pointing, (reissue, No. 813)..	Royal E. House	4,464
Treadle Cams in Looms, operating for tweeling..	Richard Garsel	4,646

DISCLAIMERS ENTERED IN 1860.

Invention or Discovery.	Name of Patentee.	Number.
H.		
Hat Bodies	H. A. Burr	9,450
M.		
Mowing Machine.....	Andrew J. Cook.....	4,861
W.		
Water to Fire Engines, Mode of applying.....	Franklin Ransom and Uziah Wenman.....	1,980

REPORT
OF THE
COMMISSIONER OF PATENTS
FOR THE YEAR 1860.

UNITED STATES PATENT OFFICE,
January, 1861.

SIR: In compliance with the fourteenth section of the act, entitled
“An act in addition to the act to promote the progress of science and
the useful arts,” approved March 3, 1837, I have the honor to submit
a report of the operations of this office during the year 1860.

No. 1.

Number of applications during the year.....	7,653
Number of patents granted, including designs, reissues, and additional improvements.....	4,819
Number of caveats filed.....	1,084
Number of applications for extension of patents.....	74
Number of patents extended.....	29
Number of patents expired, 31st December, 1860.....	614
Of the patents granted there were—	
To citizens of the United States.....	4,781
To subjects of Great Britain	21
To subjects of the French Empire.....	12
To subjects of other foreign governments.....	5

No. 2.

Statement of moneys received during the year, namely:	
On applications for patents, reissues, additional improvements, extensions, caveats, disclaimers, and appeals	\$240,867 00
For copies, and for recording assignments.....	15,485 59
Total	<u>\$256,352 59</u>

No. 3.

Statement of expenditures from the patent fund during the year, namely:	
For salaries	\$100,685 55
For amount paid under the fifth section of the act of June 25	9,887 15
For contingent expenses.....	60,296 01
For temporary clerks.....	51,497 93
For withdrawals.....	28,960 00
For refunding money paid into the Treasury by mistake.	302 50
For judges in appeal cases	1,075 00
	<u>\$252,704 14</u>

No. 4.

Statement of the condition of the patent fund.

Amount to the credit of the patent fund, 1st January, 1860	\$85,905 62
Amount paid in during the year	256,352 59
Total	<u>\$342,258 21</u>
Deduct expenditures during the year	252,704 14
Which leaves in the Treasury, 1st January, 1861, the sum of.....	<u>\$89,554 07</u>

No. 5.

Table exhibiting the business of the office for twenty-four years, ending December 31, 1860.

Years.	Applica- tions filed.	Caveats filed.	Patents issued.	Cash re- ceived.	Cash ex- pended.
1837.....			435	\$29,289 08	\$33,506 98
1838.....			520	42,123 54	37,402 10
1839.....			425	37,260 00	34,543 51
1840.....	765	228	473	38,056 51	39,020 67
1841.....	847	312	495	40,413 01	52,666 87
1842.....	761	291	517	36,505 68	31,241 48
1843.....	819	315	531	35,315 81	30,776 96
1844.....	1,045	380	502	42,509 26	36,344 73
1845.....	1,246	452	502	51,076 14	39,395 65
1846.....	1,272	448	619	50,264 16	46,158 71
1847.....	1,531	533	572	63,111 19	41,878 35
1848.....	1,628	607	660	67,576 69	58,905 84
1849.....	1,955	595	1,070	80,752 78	77,716 44
1850.....	2,193	602	995	86,927 05	80,100 95
1851.....	2,258	760	869	95,738 61	86,916 93
1852.....	2,639	996	1,020	112,056 34	95,916 91
1853.....	2,673	901	958	121,527 45	132,869 83
1854.....	3,324	868	1,902	163,789 84	167,146 32
1855.....	4,435	906	2,024	216,459 35	179,540 33
1856.....	4,960	1,024	2,502	192,588 02	199,931 02
1857.....	4,771	1,010	2,910	196,132 01	211,582 09
1858.....	5,364	943	3,710	203,716 16	193,193 74
1859.....	6,225	1,097	4,538	245,942 15	210,278 41
1860.....	7,653	1,084	4,819	256,352 59	252,820 80

It will be seen by the foregoing statement of the operations of this office during the year 1860, that under the protection of the laws provided by Congress, deficient as they are in many respects, the inventive genius of our countrymen has been active beyond precedent, and that the business of the office has increased in a corresponding ratio.

Although the patent laws of this country, as revised by the act of July 4, 1836, and still further modified by the acts of March 3, 1837; March 3, 1839; August 29, 1842; May 27, 1848; and August 30, 1852, are believed to embrace the most perfect system of patent jurisprudence known to the world, yet they are far from approaching that standard which experience has shown is necessary to place them beyond reproach. Many of the defects inherent in the law have been so clearly and forcibly set forth by the various able and distinguished gentlemen who have been at the head of the office, that I find nothing to add, in the way of argument, to show the necessity of their correction to the effective administration of the affairs of the office. Were it otherwise, I should find myself relieved of this duty, since it is understood that a bill has already passed one branch of Congress, which, if it shall succeed in the other, will have a remedial effect that will go far to prevent the grant of worthless patents, to the detriment of the country, and to secure the allowance of valid claims as a reward to the meritorious inventor. I can but hope that the bill will pass at

an early day. It has in its main features received the sanction of gentlemen whose legal training and experience lend to their judgment that respect and dignity which are generally the concomitants of, and grace, profound attainments. It meets my own cordial approbation.

There are, however, other imperfections in the existing laws which I believe the pending bill does not propose to cure, and which, as far as my information extends, have not been heretofore the subject of communication to the legislature.

By the seventh and eighth sections of the act of July 4, 1836, an appeal lay from the decision of the Commissioner of Patents refusing a patent, and in interference cases, to a board of examiners, composed of three disinterested persons, who were appointed for that purpose by the Secretary of State; and they, or a majority of them, were empowered, on examination and on consideration of the matter, "to reverse the decision of the Commissioner, either in whole or in part; and their opinion being certified to the Commissioner," he was to "be governed thereby in the further proceedings to be had on such application."

But this board, temporary in its nature, its members being appointed for each occasion, and their services inadequately remunerated, experience proved to be an entire failure; and hence, by the eleventh section of the act of 1839, it was abolished, and the appellate jurisdiction transferred "to the chief justice of the district court of the United States for the District of Columbia." This was a step in advance. It was a decided improvement upon the original tribunal, and gave rise to no complaint, until the year 1850, when Chief Justice Cranch announced to this office that he was unable, by reason of the infirmities of age, to discharge the duties imposed upon him by the acts of Congress. From this period up to the 30th of August, 1852, a defeated party had no remedy from an adverse decision of the Commissioner; and the act of Congress of the latter date, which was designed as a remedy for this state of things, was only partial in its effect, for the right to appeal to the chief justice still remained; its remedial agency consisting only in the provision that appeals might "*also* be made to either of the assistant judges of the circuit court of the District of Columbia." The evils resulting from this condition of affairs were grievous, as might have been expected. In *ex parte* proceedings, a disappointed applicant, who might be disposed to obstruct the ends of justice, could, although conscious of the substantial correctness of the official decision, by appealing to the infirm chief judge, secure to himself the right to manufacture and sell the thing invented during that official's lifetime, if during his lifetime he should be unable, as he was, to discharge the duties imposed on him. Many appeals had been taken to Judge Cranch, before the passage of the remedial act of 1852, by parties aware of his inability to act. Some of the applicants refused to transfer their causes to one of the associate judges. In such cases, where there was no opposing party, the evils resulting were such as have just been portrayed; but when the contest was between two *bona fide* and independent inventions, they were still worse. The appellants were not only permitted to make and vend the article invented with impunity so long as the chief justice should live, and thus secure a monopoly for more than fourteen years if they should finally secure

their patents, but they were enabled to prevent the issuing of patents to the other and successful parties, who were willing and anxious to put the public in immediate possession of the fruits of their genius, which is one of the considerations for the grant of a patent.

Commissioner Hodges was prompt in his energies to meet and crush these great wrongs. He accordingly issued his orders that in all cases where appeals had been taken to the chief justice in cases of interference, the appellants should amend by transferring them to one of the assistant judges; and that all appeals in like cases that should thereafter be brought should be taken to the same officers.

Commissioner Mason was anxious to support his predecessor; but he doubted the competency of the Commissioner of Patents to limit the right of appeal, however strong the necessity. In a case then before him, he said he had every disposition to do this if he had the power. The matter was, therefore, laid before Attorney General Cushing for his advice, who, in pronouncing his opinion, said: "I perceive the inconvenience involved in the fact, that the party against whom the Commissioner has decided, in a case of interference, may, by an appeal to the chief justice, which he by infirmity is unable to hear and determine, purposely delay and obstruct the final decision of the case in favor of the rightful claimant to the patent, and thus injustice be done. But Congress, and Congress alone, has, in my opinion, power to remedy the evil."

I have been thus minute in tracing the working of the several statutes giving the right to an appeal, for the purpose of stating with the more emphasis that the act of 1852, devolving upon the chief justice and either of the associate judges of the circuit court of the District jurisdiction in appeal cases from the adverse decisions of this office, is still in force; that since the demise of Judge Cranch in 1855, we have had a recurrence of the inconvenience resulting from the act, in the inability of one of the associate judges to attend to the duties of his office for about a year; and that a similar contingency may arise at any day, when, of course, such appeals as may have been taken to the disabled judge must await the issue of events, to the injury alike of the public and of individuals.

Another serious objection to the act of 1852, and in which particular it should, in my opinion, be amended, flows from the rate and manner of compensating the judges for their services. By the thirteenth section of the act of the 3d March, 1839, the chief justice was paid annually out of the patent fund, in consideration of the duties therein imposed, the sum of \$100. But this section was repealed by the act of 1852, and the Commissioner of Patents was required to pay to the chief justice, or assistant judges, according as the appeal might be taken to either, the sum of twenty-five dollars, required to be paid by the appellant into the Patent Office by the eleventh section of the act of the 3d of March, 1839.

The reason of this enactment it is now difficult to discover; but the evils resulting from it must, I think, be apparent to every reflecting mind, and are very forcibly stated by the Hon. Secretary of the Interior, in his annual report to the President of the United States for 1857.

“The appellant not only selects the judge who shall try the case, but also pays the fee of twenty-five dollars allowed him. The amount of compensation thus received will depend upon the number of cases brought before him; that number will inevitably be influenced by his course of decision. The judge is thus placed in a position of embarrassment, if not of humiliation, alike to be deplored by himself and the country.”

There is still another point in which the act allowing appeals imperiously calls for amendment. The eleventh section of the act of March 3, 1839, requires the commissioner to “lay before the said judge all the original papers and evidence in the case, together with the grounds of his decision fully set forth in writing, touching all the points involved by the reasons of appeal to which the revision shall be confined.” This “evidence,” most commonly consists of the *records* of the office, the drawings, specifications, and models of patented and rejected applications, which are needed always in the office for the transaction of its current business, and yet this law requires that with every appeal, the commissioner shall transmit to the selected judge that portion of the records appertaining thereto, which, as proceedings are at chambers, means to the residence of the judge. In the meantime, these records are withdrawn from public inspection and instances have occurred, in which applications for patents have been suspended for months, in consequence of the danger of acting upon them in the absence of a portion of the records relating thereto.

Such are the evils incident to the laws of appeal, as they now exist. There is no difficulty in the way of their amendment, and, in my opinion, no time should be lost in applying the proper remedies. Why could not appeals from the adverse decision of the Commissioner of Patents be taken to the Circuit Court of the District of Columbia, instead of to the individual judges? Why could not each judge for the duties thus imposed be allowed an annual compensation of, say \$500, and when a patent cause should be heard, why not require the Circuit Court to sit in the Patent Office, in a room to be provided for that purpose? I confess I can see no objection to an amendment of this nature, and respectfully recommend that such a law be enacted. It would obviate all the defects above explained, and it is confidently believed, would meet with the approbation of the judges.

Previous to the month of December, 1857, it was the practice of the Commissioner to hear appeals in person from the adverse action of the examiners; but it was soon found, from the natural increase of the business of the office, that this was becoming a physical impossibility; and hence was adopted the alternative of deputing temporary boards of examiners, which, in some measure, relieved the Commissioner of the burden thrown upon him. But the plan soon developed its own imperfections. Each board had its own principle of action, and, in many instances, this differed from the rules prescribed by the Commissioner. As a corrective, it was at length determined by Commissioner Holt to establish a permanent board of appeal within the office, whose members, three in number, should be taken from the examining corps, and whose duty it should be to examine all *ex parte* rejected cases, and submit their report and recommendation, as to their final

disposal, to the Commissioner for his approval. This board has now been in existence for over three years, and the wisdom of its creation is a matter placed beyond all doubt. Guided in its principles of action by the doctrines established by the courts, and illustrated by such eminent Commissioners as Mason, Holt, Bishop, and Thomas, whose confidence it has always enjoyed, "the result of its action," as stated by Mr. Holt, in his report for 1858, continues to be "eminently satisfactory," and "to command, it is believed, the entire confidence of the country."

Since its establishment the board of appeals has revised 1,790 cases, 748 of which it has reported for final rejection, while 271 have received its partial action. Of those rejected, only forty-two have been carried up on appeal to the judges of the circuit court of the District. It is confidently believed that no other tribunal of a like nature can exhibit such evidence of public approbation.

Prior to the 1st July, 1860, interferences were declared, examined, and the result reported to the Commissioner, by the separate examiners to whose class they belonged. While the business of the office was comparatively light, and the number of examiners few, there was not much objection to this course; but as the number of applications and examiners increased—the former, however, in a greatly augmented ratio to the latter—it was found to be impossible for the examiners to attend to their current duties in an intelligent manner when they were subject continually to be called off, to devote, in many instances, a week at a time, to the hearing and determination of questions arising between contesting applicants. But this perhaps was not the greatest evil. The examiners had increased in the course of a few years from two in number to twelve; and as each examiner disposed of his own interferences, there were as many different sets of rules and principles established as there were differently constituted minds. The want of harmony, the confusion, in short, resulting from such a state of things, was a source of great complaint, and involved the office practice in a mist so impenetrable that the most acute became discouraged in their search for a clear and well-defined guide to the path they sought. A remedy seemed to be imperative; and as the only resource within his power, Commissioner Thomas deputed one of the most practiced and competent examiners to discharge this duty, whose action, characterized by great industry and ability, it is believed has given eminent satisfaction.

I would suggest that Congress make the designation permanent with reference to this particular service, giving the sanction of positive enactment to a rule eminently successful, if not imperatively required, in the future conduct of the business of the office.

S. T. SHUGERT,
Acting Commissioner of Patents.

Hon. JOHN C. BRECKINRIDGE,
Vice-President United States.

ALPHABETICAL LIST OF PERSONS WHOSE PATENTS FOR INVENTIONS AND DISCOVERIES HAVE EXPIRED DURING THE YEAR 1860. 8

ANNUAL REPORT OF THE

No.	Patentee.	Invention or discovery.	Date.	Class.
4742	Acton, W. R.	Tailor's measure.	Sept. 5, 1846.	XXI.
4574	Adams, Benjamin F.	Cordage, machinery for making.	June 13, 1846.	VII.
4748	Adams, Joseph W., assignor to S. H. Lewis and J. C. Clapp.	Bedstead fastenings.	Sept. 10, 1846.	XVII.
4717	Ahrens, Adolph F.	Scarificator.	Aug. 26, 1846.	XX.
4876	Ahrens, Adolph F.	Trusses.	Nov. 28, 1846.	XX.
1443	Aiken, Herrick	Sockets for holding tools.	Dec. 27, 1839.	I.
4400	Albert, Dominique Frick.	Soap, manufacture of.	Mar. 7, 1846.	IV.
4376	Aldrich, John F., and Otis C. Foot.	Washing machines.	Feb. 10, 1846.	XVII.
4774	Allcott, William W.	Grain, kiln drying.	Sept. 26, 1846.	I.
4754	Allen, Augustus C.	Curing meat, &c.	Sept. 12, 1846.	IV.
4484	Allen, Daniel R.	Hay presses.	April 25, 1846.	XII.
4764	Allen, Oliver.	Whaling lances.	Sept. 19, 1846.	XXII.
4749	Allen, William H., and James Slocum.	Stoves, cooking.	Sept. 10, 1846.	V.
4418	Andrews, William D.	Pumps, centrifugal.	Mar. 14, 1846.	XI.
4549	Anthony, David, sr.	Ploughs.	May 30, 1846.	I.
4903	Anthony, Samuel D., and D. Barnum.	Incrustation of steam boilers, preventing.	Dec. 22, 1846.	IV.
4466	Armsby, J. M. C., assignor to Ruggles, Nourse & Mason.	Ploughs, regulating the draught of.	April 18, 1846.	I.
4502	Arndt, Daniel.	Bee-hives.	May 9, 1846.	I.
4496	Asbury, D.	Silver and gold ores, machinery for washing.	May 2, 1846.	II.
4659	Atwater, James.	Locks, door.	July 21, 1846.	II.
4850	Avery, Ira.	Washing machines.	Nov. 12, 1846.	XVII.
4814	Babbitt, Benjamin.	Brushes, machinery for trimming.	Oct. 14, 1846.	XVII.
1252	Babbitt, Isaac.	Boxes for axles and gudgeons.	July 17, 1839.	X.
4669	Backus, Evens.	Stoves.	July 28, 1846.	V.
4365	Bacon, Lathrop S.	Stoves, cooking.	Jan. 23, 1846.	V.
4911	Baeder, Charles.	Whips, finishing raw hide.	Dec. 28, 1846.	XXII.
4557	Bagley, A. G.	Pen and pencil holders.	June 6, 1846.	XVIII.
4840	Bagley, A. G.	Pencils, ever-pointed.	Nov. 6, 1846.	XVIII.
6328	Bain, Alexander.	Telegraph, electric.	April 17, 1849; in England April 12, 1846.	VIII.
4530	Baldwin, M. W.	Locomotive carriages.	May 16, 1846.	VI.
4541	Baldwin, M. W.	Steam whistle, combining the, with the boiler.	May 28, 1846.	VI.
4627	Ballard, William.	Jack-screws.	July 7, 1846.	XII.
4546	Baker, Henry F.	Boiler furnaces, steam.	May 30, 1846.	VI.
4877	Baker, Horace.	Staves, apparatus for jointing.	Dec. 9, 1846.	XIV.
4542	Baker, W. H., and H. R. Worthington.	Steam engines, balancing valves of.	May 28, 1846.	VI.
4857	Barber, Asa.	Flocks, machinery for cutting.	Nov. 18, 1846.	III.
4622	Barker, John.	Furnaces, air-heating.	July 7, 1846.	V.
4820	Barlow, Nathaniel N.	Steam engines.	Oct. 21, 1846.	VI.
5682	Barnes, William S.	Tuyeres.	July 25, 1848; in Canada, October 21, 1846.	II.
4765	Barnum, Daniel.	Steam engines, double-cylinder.	Sept. 19, 1846.	VI.
4538	Barrows, E.	Registers for furnaces.	May 28, 1846.	V.
4410	Bartholomew, Frederick H.	Hydrants.	Mar. 7, 1846.	XI.

4693	Bartholomew, Frederick H.	Hydrants	Aug. 12, 1846	XI
4767	Barton, Gardner, jr., and Lysander Button	Engines, fire	Sept. 19, 1846	XI
4563	Battin, Joseph	Gas burners	June 6, 1846	V
4460	Beach, Waldron	Corn shellers	April 18, 1846	I
4895	Beal, William, jr., and B. S. Hale	Mills for cracking and grinding	Dec. 17, 1846	XIII
4729	Beers, J. B.	Conception, preventing	Aug. 28, 1846	XX
7738	Benlowski, Bartholomew	Printing	Oct. 29, 1850; in England, November 17, 1846	XVIII
4678	Bennett, Jonathan	Shingle machines	July 31, 1846	XIV
4851	Beschornann, Aug. H.	Hides, handling	Nov. 14, 1846	XVI
4695	Bigelow, Erastus B.	Looms, power	Aug. 18, 1846	III
4365	Billings, Henry C.	Stoves, register-plates for	Jan. 28, 1846	V
4709	Bishop, Albert D.	Boom derricks	Aug. 22, 1846	XII
4778	Bishop, Charles	Carding machines	Sept. 26, 1846	III
4555	Black, James	Carding machines, rotary	May 30, 1846	VI
4371	Blackman, Samuel G.	Straw cutters	Feb. 10, 1846	I
4576	Bliss, Leonard, assignor to Samuel T. Jeffery	Plane-irons, fastening and adjusting	June 16, 1846	XIV
4713	Blount, William, and John Cammett	Ice, cutting and removing	Aug. 26, 1846	XXII
4413	Blue, John	Straw and grain, belts for conveying	Mar. 14, 1846	I
4655	Booth, Elizur L.	Thrashing machines	July 24, 1846	I
4651	Boss, James	Pencils, ever-pointed	July 20, 1846	XVIII
5144	Boyden, U. A.	Water wheels	June 5, 1847; antedated Dec. 5, '46	XI
5090	Boyden, U. A.	Diffusers for water wheels	May 1, 1847; antedated Nov. 1, '46	XI
5068	Boyden, U. A.	Hanging shafts of water wheels	April 17, 1847; antedated Oct. 17, '46	XI
4758	Bradfield, Edward	Bolting flour	Sept. 15, 1846	XIII
4415	Brant, John G.	Coal, conveying, cleaning, and assorting	Mar. 14, 1846	V
4362	Branwhite, Charles	Composition for making handles, moulds, &c.	Jan. 23, 1846	IV
4873	Bretzger, Melchoir	Wire gauze, looms for weaving	Dec. 5, 1846	II
1157	Buck, Darius	Improvement in cooking stoves	May 20, 1839	V
5030	Bulkley, Ralph	Pumps for ships	Mar. 20, 1847; antedated Dec. 19, '46	XI
4866	Bulkley, W., and P. Norton	Shears, circular	Nov. 28, 1846	II
4631	Burch, William S.	Chimney caps	July 14, 1846	V
4679	Burdich, Jason L.	Heating water in vats	July 31, 1846	V
4740	Bussey, William C.	Ditching and embanking, machines for	Sept. 3, 1846	IX
4407	Call, Amos	Doors, fastenings for	Mar. 7, 1846	II
4724	Carlisle, Charles, and Edwin Estabrook	Mill stones, dressing	Aug. 28, 1846	XIII
4821	Carlisle, Josiah C.	Cloth, machinery for dressing	Oct. 21, 1846	III
4849	Carter, James W.	Roasters, coffee	Nov. 12, 1846	XXII
4747	Catchpole, George	Straw cutters	Sept. 5, 1846	I
4412	Chafee, Nicholas U.	Spirits of turpentine and rosin, manufacture of	Mar. 14, 1846	IV
4979	Chalfant, Reuben	Corn sheller	Feb. 27, 1847; antedated Aug. 27, '46	I
4876	Chandler, Thomas A.	Mortising and tenoning machine	Dec. 9, 1846	XIV
4775	Chapman, Elijah	Brakes, carriage	Sept. 26, 1846	X
4733	Chappel, David	Yokes, ox	Sept. 3, 1846	I
4361	Chase, Moses	Washing machines	Jan. 23, 1846	XVII
4392	Chase, Moses	Chimney caps	Mar. 7, 1846	V
4693	Childs, Horace	Bridges, truss	Aug. 12, 1846	IX
4600	Church, D. A. & S.	Grain, screens for	June 27, 1846	I
4507	Clark, Abishal	Meat cutters	May 9, 1846	XVII
4419	Clarke, Thomas C.	Cocks, stop	Mar. 14, 1846	XI
4701	Clayton, William	Brakes for carriages	Aug. 18, 1846	X
9316	Clement, William H.	Sugar pans, scumming apparatus for	Oct. 12, 1852; in England, July 23, 1846	IV

Persons whose patents for inventions have expired.

No.	Patentee.	Invention or discovery.	Date.	Class.
4582	Clow, Daniel.....	Fanning mills.....	June 16, 1846.....	I.
4543	Clute, John Bt.....	Cooking stoves.....	May 28, 1846.....	V.
4585	Cobb, William.....	Stoves, cooking.....	June 16, 1846.....	V.
4467	Colburn, David G.....	Pumps.....	April 25, 1846.....	XI.
4487	Collins, Michael.....	Chimneys, ventilators for.....	April 25, 1846.....	V.
4462	Colton, Joseph.....	Pocket Look and watch safe.....	April 18, 1846.....	XXI.
4819	Compton, Nathan.....	Saw mills, apparatus for feeding.....	Oct. 21, 1846.....	XIV.
4785	Conde, Adam C.....	Stoves, cooking.....	Oct. 3, 1846.....	V.
4871	Conrad, S. & G. J.....	Stoves, cooking.....	Dec. 3, 1846.....	V.
4348	Converse, Elijah.....	Corn shellers.....	Jan. 7, 1846.....	I.
4771	Cornelison, Jacob.....	Stoves, cooking.....	Sept. 26, 1846.....	V.
4861	Cook, Andrew J.....	Mowing machines.....	Nov. 20, 1846.....	I.
4429	Cooke, Jacob, and John Strickler.....	Trusses.....	Mar. 21, 1846.....	XX.
4900	Cope, Samuel.....	Brakes for carriages, self-acting.....	Dec. 22, 1846.....	X.
4597	Cox, James.....	Fire escapes.....	June 27, 1846.....	XXII.
4521	Culbertson, Thomas.....	Brick presses.....	May 16, 1846.....	XV.
4553	Cullen, John M.....	Ploughs.....	May 30, 1846.....	I.
4852	Culp, G. W. D.....	Cider mills.....	Nov. 14, 1846.....	XIII.
4841	Cundell, William.....	Guards for cap-spinners, machinery for making.....	Nov. 10, 1846.....	II.
4753	Cutter, Ezekiel, and Stephen Blanchard.....	Mill stones, artificial.....	Sept. 10, 1846.....	XIII.
4802	Cutting, James A., and George Butterfield.....	Cars, railroad, couplings for.....	Oct. 7, 1846.....	X.
4672	Danforth, Elijah H.....	Yokes, horse.....	July 28, 1846.....	I.
4408	Darling, Jeremiah.....	Reaping machines.....	Mar. 17, 1846.....	I.
4533	Darling, Jeremiah.....	Bel lows, rotary.....	May 23, 1846.....	II.
4617	Davidson, John.....	Lamps.....	July 2, 1846.....	V.
4354	Davies, Thomas A.....	Clocks.....	Jan. 15, 1846.....	VIII.
4687	Davies, Thomas A.....	Clocks.....	Aug. 12, 1846.....	VIII.
4603	Davies, Henry S.....	Boot crimps.....	June 27, 1846.....	XVI.
4403	Davis, John H.....	Locks, door.....	March 7, 1846.....	II.
4356	Day, Horace H.....	Boats, India rubber, portable.....	Jan. 15, 1846.....	VII.
4463	Debow, C. S.....	Bedsteads, extension.....	April 18; antedated April 11, 1846.....	XVII.
4771	Deniston, James.....	Water wheels.....	April 25, 1846.....	XI.
4860	Denniston, John T.....	Harness saddles.....	Nov. 20, 1846.....	XVI.
4446	Deshon, Daniel, 2d.....	Paddle wheels.....	April 4, 1846.....	VII.
4686	Devlan, P. S., J. Hancock, and C. S. Wood.....	Oiling gudgeons.....	Aug. 8, 1846.....	XXII.
4358	De Wolf, Benjamin F.....	Stoves, cooking.....	Jan. 15, 1846.....	V.
1148	Dimpfel, Frederick P.....	Improvement in furnaces, for economizing fuel and consuming smoke.....	May 9, 1839.....	V.
1448	Dimpfel, Frederick P.....	Improvement in the construction of fan blowers.....	Dec. 28, 1839.....	XI.
4477	Donges, Henry.....	Tailor's measures.....	April 25, 1846.....	XXI.
4708	Doolittle, Hiram S.....	Rakes, horse.....	Aug. 22, 1846.....	I.
4389	Drummond, John.....	Candle moulding.....	Feb. 20, 1846.....	IV.
4566	Du Bois, John, jr.....	Sleighs, apparatus for retarding in descending inclinations.....	June 13, 1846.....	X.
4571	Du Bois, John, jr.....	Brakes for carriages, self-acting.....	June 18, 1846.....	X.
4966	Durand, F. and O. Pecqueur.....	Scabbards, sheaths, &c., making of leather.....	Feb. 27, 1847; in England October 15, 1846.....	XIX.

4697	Dutton, John	Ice, manufacture of	Aug. 18, 1846	XXII.
4725	Dysert, William	Cultivators	Aug. 28, 1846	I.
4503	Echols, Josephus	Propelling vessels	May 9, 1846	VII.
4377	Eddy, George W.	Oven doors, hollow	Feb. 10, 1846	V.
4784	Eddy, Walden, and John A. Taplin	Threshing machines	Oct. 3, 1846	I.
4902	Edelman, George W.	Cultivating machines for	Dec. 22, 1846	VIII.
4762	Edwards, Isaac	Cultivators	Sept. 19, 1846	I.
4656	Eldred, Allen	Potato plough	July 24, 1846	I.
4515	Ellicott, Andrew, and John McCrone	Furnaces, reverberatory	May 16, 1846	II.
4670	Englebrecht, T. F., and G. F. Skiff	Hooks, fish	July 28, 1846	II.
4869	Estes, Philip	Casks, machinery for chamfering, crozing, and dowelling	Dec. 3, 1846	XIV.
4372	Essex, Jeremiah	Cotton batting, manufacture of	Feb. 10, 1846	III.
1122	Evans, Cadwallader	Improvement in steam boilers, and apparatus to be used on board of steamboats to prevent the explosion of boilers	Apr. 15, 1839	VI.
4761	Fairbanks, Thaddeus	Steelyards	Sept. 15, 1846	XII.
4414	Fairchild, Starr	Carrriage, hanging	Mar. 14, 1846	X.
4527	Fales, Squire M.	Furnaces, feeding	May 16, 1846	II.
4788	Fanshaw, Charles	Stocks, neck	Oct. 3, 1846	XXI.
4349	Farrand, Jehiel J.	Wells, raising water from	Jan. 7, 1846	XI.
4550	Fink, Julius	Ranges, cooking	May 30, 1846	V.
4728	Fisher, M. H., assignor to J. A. Hyde	File cutting, machinery for	Aug. 28, 1846	II.
4973	Fisk, Asa, jr., L. D. Rumsey, and O. S. Gregory	Mill stones, machinery for dressing	Feb. 20, 1847; antedated Oct. 10, '46	XIII.
4699	Fitch, Edward G.	Life preservers	Aug. 18, 1846	XVI.
4982	Fitch, William F.	Shingle machines	Feb. 27, 1847; antedated Aug. 27, '46	XIV.
4579	Fitzgerald, Jesse	Horsepowers	June 16, 1846	XIII.
4636	Fitzgerald, Jesse	Threshing machines	July 14, 1846	I.
4755	Fitzgerald, Jesse	Grinding, artificial stones for	Sept. 12, 1846	XIII.
4439	Fitzsimmons, Patrick	Oil, fish, cleansing	April 4, 1846	IV.
4660	Flint, Richard	Fles, rat-tail	July 24, 1846	II.
4897	Folson, Sewall	Skirts, ladies'	Dec. 17, 1846	XXI.
4578	Forst, Frederick	Mattresses, spring	June 16, 1846	XVII.
4741	Fortune, Thomas L.	Hemp brakes	Sept. 3, 1846	III.
4461	Foster, Clinton	Reaping machines	April 18, 1846	I.
4815	Foster, Clinton, and Levi Jones	Threshing machines	Oct. 17, 1846	I.
4601	Fouse, H. D. and J. McK.	Stoves	June 27, 1846	V.
4773	Fraser, Hasson	Harness, hames for	Sept. 26, 1846	XVI.
4504	Frederick, Robert, and G. A. Trump	Corpses, refrigerators for	May 9, 1846	XXII.
4716	Fulton, George W.	Propelling vessels	Aug. 26, 1846	VII.
4425	Gale, Edwin K.	Supporters, abdominal	Mar. 14, 1846	XX.
4907	Gates, Stephen F.	Steam engines, slide valves for	Dec. 28, 1846	VI.
4837	Gay, Lowman	Bridges	Nov. 4, 1846	IX.
4360	Gazzam, E. I.	Bedstead fastenings	Jan. 23, 1846	II.
4450	Gemrig, Jacob H.	Lancets, spring	April 11, 1846	XX.
4920	Gendebien, I. B., and A. Houyet, assignors to J. Burrows Hyde	Mills, flouring	Jan. 5, 1847; in Europe Feb. 11, 1846	XIII.
4615	Germer, William	Tanning	July 2, 1846	XVI.
4757	Gibbs, Joshua	Balance platform	Sept. 12, 1846	XII.
4492	Gifford, Luther	Doors, &c., weather strips for	May 12, 1846	IX.
4611	Girard, Augustus	Levels, plumb	July 2, 1846	VIII.
4447	Glasco, Thomas	Wheels, car	April 4, 1846	X.
4607	Glover, J. S., assignor to G. W. Heard	Warp net fabrics	June 27, 1846	III.
4677	Glover, Lorenzo B.	Corn shellers	July 31, 1846	I.
4353	Goff, Darius	Cotton batting, mode of glazing	Jan. 15, 1846	III.

Persons whose patents for inventions have expired.

No.	Patentee.	Invention or discovery.	Date.	Class.
4801	Goldenburg, John.....	Grate, fireplace.....	Oct. 7, 1846.....	V.
4806	Gordon, Jonathan W.....	Corn shellers.....	Oct. 7, 1846.....	I.
4390	Granger, R. D.....	Stoves, cooking.....	Feb. 20, 1846.....	V.
4394	Granger, R. D.....	Stoves, cooking.....	Mar. 7, 1846.....	V.
4581	Grannis, Charles W.....	Tuyeres.....	June 16, 1846.....	II.
4796	Grannis, Charles W.....	Engines, fire.....	Oct. 7, 1846.....	XI.
4380	Graves, Samuel.....	Stoves, cooking.....	Feb. 10, 1846.....	V.
4525	Gray, Albert W.....	Nail machinery, wrought.....	May 16, 1846.....	II.
4680	Gray, Gibbons.....	Horse-tails after nicking, holding up.....	July 31, 1846.....	XXII.
4568	Gregg, Joseph A.....	Snow ploughs for railroads.....	June 13, 1846.....	VI.
4658	Greenleaf, Joseph.....	Washing machines.....	July 24, 1846.....	XVII.
4565	Greenough, J. J., assignor to George Nichols.....	Mortising and boring hubs, machine for.....	June 13, 1845.....	XIV.
4671	Groom, Smith.....	Screws and nuts, machinery for cutting threads on.....	July 28, 1846.....	II.
4829	Guild, Joseph.....	Bedsteads, boring and cutting screws on.....	Oct. 29, 1846.....	XVII.
4853	Hale, Elisha.....	Water wheels.....	Nov. 14, 1846.....	XI.
4468	Hall, Joel, 2d.....	Spoons, lasting.....	April 25, 1846.....	II.
4856	Hall, Samuel.....	Metal, sheet, machinery for cutting, into oval shapes.....	Nov. 18, 1846.....	II.
4427	Halloran, Rich'd.....	Hats, ventilating.....	Mar. 21, 1846.....	XXI.
4752	Hamann, Augustus.....	Spark arresters.....	Sept. 10, 1846.....	VI.
5590	Hancock, Charles.....	Gutta percha, making bands or belts of.....	May 23, 1848; in England May 15, 1846.....	IV.
4517	Hand, Christopher.....	Water wheels.....	May 16, 1846.....	XI.
4694	Harback, Frederick.....	Bridges.....	Aug. 12, 1846; antedated Feb. 12, '46.....	IX.
4432	Hard, D. B. W.....	Truss, ladies'.....	Mar. 21, 1846.....	XX.
4422	Harkness, David.....	Rakes, grain.....	Mar. 14, 1846.....	I.
4357	Harmon, J. W.....	India rubber, preparing, previous to grinding.....	Jan. 15, 1846.....	IV.
4587	Hart, Silas.....	Boots and shoes, machines for lasting.....	June 20, 1846.....	XVI.
4595	Hart, Walter W.....	Spoons, manufacture of.....	May 9, 1846.....	II.
4451	Hartley, Thos.....	Brick presses.....	April 11, 1846.....	XV.
4732	Hartshorn, Oliver S., H. M. Payson, and Aaron Ring.....	Stoves, combined.....	Sept. 3, 1846.....	V.
4613	Harvey, Thomas W.....	Screw heads, machinery for nicking.....	July 2, 1846.....	II.
4738	Harvey, Thomas W.....	Screw blanks, machine for heading.....	Sept. 3, 1846.....	II.
4508	Haslet, John, and C. Devitt.....	Bedstead fastenings.....	May 9, 1846.....	XVII.
4359	Hassard, Thomas.....	Bridges, truss.....	Jan. 15, 1846.....	IX.
4668	Hatch, William.....	Spike and nail machine.....	July 28, 1846.....	II.
4839	Hatcher, Jacob J.....	Pencil and pen cases.....	Nov. 6, 1846.....	XVIII.
4536	Haveland, Frederick, and E. Tuttle.....	Water wheels.....	May 28, 1846.....	XI.
4720	Hayes, John P.....	Ranges, cooking.....	Aug. 26, 1846.....	V.
1176	Haynes, Hezekiah.....	Improvement in rakes.....	June 18, 1839.....	I.
4498	Hayward, Joseph.....	Composition for blacking leather.....	May 9, 1846.....	IV.
13970	Healey, John, assignor to James Bishop.....	Fabrics, woven.....	Dec. 18, 1855; in England Nov. 17, 1846.....	III.
4822	Henth, Josiah M.....	Steel, manufacture of.....	Oct. 24, 1846; in England Feb. 4, 1846.....	II.
4364	Hewes, Joseph V.....	Metal, sheet, double seamer, for working.....	Jan. 23, 1846.....	II.

4438	Hibson, James.....	Travelling trunks, frames of.....	April 4, 1846.....	XVI.
4884	Higgs, William.....	Door knobs, casting, upon their collars.....	Dec. 10, 1846.....	II.
4878	Hinkley, Benjamin.....	Bedstead fastenings.....	Dec. 9, 1846.....	II.
4396	Hinman, David.....	Pistons for pumps, engines, &c.....	Mar. 7, 1846.....	VI.
4823	Hinman, David.....	Pumps for raising water, &c.....	Oct. 24, 1846.....	XI.
4653	Hoats, Daniel.....	Threshing machines.....	July 20, 1846.....	I.
4531	Hobart, Joshua.....	Auger, mining.....	May 23, 1846.....	IX.
4760	Hobbs, James R.....	Forge, blacksmiths'.....	Sept. 15, 1846.....	II.
4514	Holbrook, Benjamin A.....	Rivetting weavers' pickers.....	May 9, 1846.....	II.
4634	Holcomb, Jedediah.....	Nail machinery.....	July 14, 1846.....	I.
4572	Hollister, David S.....	Corn shellers.....	June 13, 1846.....	XXII.
4865	Holmes, John, and A. West.....	Harpoons.....	Nov. 24, 1846.....	VII.
4397	Holmes, Richard C.....	Hatches for vessels.....	Mar. 7, 1846.....	VII.
4652	Holmes, Richard C., and J. J. Springer.....	Steering vessels, machinery for.....	July 20, 1846.....	XXI.
4584	Hough, David, Jr.....	Skirts, ladies'.....	June 16, 1846; antedated June 8, '46.	XI.
4593	House, Royal E., assignor to William Ballard.....	Filtering, stop-cocks for.....	June 27, 1846.....	V.
4777	Howard, Sebre.....	Kiln drying grain, &c.....	Sept. 26, 1846.....	I.
4887	Howd, Samuel B.....	Churns.....	Dec. 12, 1846.....	III.
4536	Howe, Frederick W.....	Cloth, apparatus for measuring and marking upon looms.....	June 6, 1846.....	IV.
4813	Howlet, I. W. & F. M. Walker.....	Preparing wheat for flouring, process for.....	Oct. 4, 1846.....	XIII.
4512	Howlet, I. W. & F. M. Walker.....	Smut machine.....	May 9, 1846.....	XI.
4409	Hunsicker, Daniel.....	Pumps for raising and measuring liquids.....	Mar. 7, 1846.....	XX.
4685	Hurlbut, Ovando.....	Pumps for raising and measuring liquids.....	Aug. 8, 1846; antedated June 21, 1846.	IV.
1156	Hutchinson, Enoch.....	Truss pads.....	May 20, 1839.....	XI.
4583	Hyatt, F. B., assignor to S. R. Sharpe.....	Improvement in ships' galley for the distillation of salt water.....	June 16, 1846.....	I.
4459	Ide, Nathan.....	Pumps for water.....	June 16, 1846.....	VI.
4554	Ingalls, Elkanah.....	Cultivators.....	April 18, 1846.....	XVIII.
4370	Isenring, Johan B., assignor to F. Langenheim.....	Boiler, steam, and furnace.....	May 30, 1846.....	II.
4646	Ives, James.....	Daguerreotype plates, coloring.....	Jan. 20, 1846.....	XVIII.
4499	Ives, J. Shaler.....	Locks for carriage doors.....	July 20, 1846.....	IV.
4848	Jackson, C. T. & W. T. G. Morton.....	Metallic reeds, tuning.....	May 9, 1846.....	I.
4736	Jacobs, Clark.....	Surgical operations.....	Nov. 12, 1846.....	VIII.
4664	Jacot, Charles Edward.....	Hulling and pearling rice.....	Sept. 3, 1846.....	XXI.
4723	Jaques, Isaac.....	Lever escapements.....	July 28, 1846.....	XV.
4783	Jarves, Deming.....	Tailors' shears.....	Aug. 28, 1846.....	XI.
4399	Jennison, William H., assignor to William Kumbel.....	Glass furnaces.....	Oct. 3, 1846.....	XI.
4386	Jennison, William H., assignor to William Kumbel.....	Filters.....	Mar. 7, 1846.....	I.
4391	Jessop, J., John Wambaugh, G. W. Ilgenfritz, and J. C. Baker.....	Cutting and grinding fodder, machines for.....	Feb. 20, 1846.....	I.
4610	Jones, Gilbert D.....	Pressing and packing spices.....	June 27, 1846.....	XII.
4737	Jones, James.....	Sash fastener, window.....	Sept. 3, 1846.....	II.
4385	Jones, William J., and Henry C. Smith.....	Seeding machine for sowing grain, &c., broadcast.....	Feb. 20, 1846.....	VIII.
4662	Johnson, Charles F.....	Clocks, turret.....	July 28, 1846.....	I.
4552	Johnson, James.....	Ploughs.....	May 30, 1846.....	XI.
4426	Johnson, Willis H.....	Pumps, rotary.....	Mar. 21, 1846.....	XI.
4491	Judd, Allen.....	Windmills.....	May 2, 1846.....	III.
4901	Keith, Edwin.....	Gins, cotton.....	Dec. 22, 1846.....	II.
4483	Kellogg, Isaac, assignor to H. Kellogg.....	Castings, cores for.....	April 25, 1846.....	I.
4501	Kelsey, William R.....	Beehives.....	May 9, 1846.....	IV.
4616	Kendall, J. G. & J. H.....	Bleaching paper pulp.....	July 2, 1846.....	II.
4675	Kern, Samuel.....	Compasses, surveyors'.....	July 31, 1846.....	I.
4401	Ketchum, William F.....	Reaping machines.....	Mar. 7, 1846.....	I.

Persons whose patents for inventions have expired.

No.	Patentee.	Invention or discovery.	Date.	Class.
4596	Kile, Conradt.	Tailors' measures.	June 27, 1846.	XXI.
4368	King, Charles	Washing machines.	Jan. 28, 1846.	XVII.
4449	King, Charles	Churn dashers.	April 4, 1846.	I.
4402	Kinsley, Rhodolphus.	Latches, mortise, for doors.	Mar. 7, 1846.	II.
4681	Kittinger, Levi.	Rat traps.	Aug. 8, 1846.	XXII.
4743	Knapp, Mylo.	Wagons, mode of attaching horses to.	Sept. 5, 1846.	X.
4666	Knowles, Jonathan.	Chairs and wagons, children's.	July 28, 1846.	X.
4745	Krauser, John and Cyrus.	Ploughs, combined.	Sept. 5, 1846.	I.
8999	Krupp, Alfred, assignor to Thomas Prosser.	Spoons, forks, &c., machinery for making.	June 8, 1852; in England, Aug. 26, 1846.	II.
4455	Krumbel, William.	Leather bands, stretching.	April 11, 1846.	XVI.
4807	L'Anglais, René.	Conductors, lightning.	Oct. 7, 1846.	VIII.
4421	Ladd, Seneca.	Rakes, horse.	Mar. 14, 1846.	I.
4684	Laighton, William.	Chairs, Encima.	Aug. 8, 1846.	XX.
4846	Lamb, L. & L. J.	Shears, rotary.	Nov. 10, 1846.	II.
4818	Lampman, Nicholas I.	Presses, hay and cotton.	Oct. 17, 1846.	XII.
4469	Langdon, Barnabas, and A. Salisbury.	Hemp dressers.	April 25, 1846.	III.
4369	Langenheim, F.	Daguerreotype plates, coloring.	Jan. 30, 1846.	XVIII.
4859	Lard, Isaac.	Mowing machines.	Nov. 20, 1846.	I.
4373	Laubach, Joseph.	Stoves, cooking.	Feb. 10, 1846.	V.
4520	Lee, John.	Stoves, cooking.	May 16, 1846.	V.
4770	Leighton, Thomas, assignor to N. E. Glass Company.	Glass furnaces.	Sept. 19, 1846.	XV.
4510	Lester, John H.	Staves, machinery for dressing.	May 9, 1846.	XIV.
5653	Letellier, I. A.	Water, screw for raising.	June 27, 1848; in France, Dec. 30, 1846.	IX.
4649	Levan, George.	Yarn, doubling, twisting and reeling.	July 20, 1846.	III.
4633	Lichtenthaeler, Samuel.	Window blind fastenings, &c.	July 14, 1846.	II.
4795	Little, David & E. Z.	Carriage steps.	Oct. 7, 1846.	II.
4883	Livingston, Roggen, Adams, Phillips & Phillips.	Door knobs, attaching, to their collars.	Dec. 10, 1846.	II.
4620	Livingston, Roggen & Adams.	Door knobs, shanks of.	July 7, 1846.	II.
4862	Livingston, Roggen & Adams.	Latches, fastening.	Nov. 24, 1846.	II.
1397	Long, Stephen H.	Improvement in the wooden frame suspension bridge.	Nov. 7, 1839.	IX.
4637	Loveland, Eleazer D.	Stoves, hot air.	Nov. 14, 1846.	V.
4954	Loveland, Samuel.	Dock, floating dry.	July 14, 1846.	IX.
4457	Lowery, Samuel.	Bricks, making.	Feb. 5, 1847; antedated Nov. 7, '46.	XV.
4458	Macon, George W.	Tobacco leaves, machinery for smoothing.	April 18, 1846.	XXII.
4558	Mansfield, Martin H.	Hulling clover, machines for.	April 18, 1846.	I.
4352	Mapes, James J., and W. A. Cox.	Evaporating pans.	June 6, 1846.	IV.
4629	March, William.	Water wheels.	Jan. 7, 1846.	XI.
4756	Marston, William W.	Printing presses.	July 14, 1846.	XVIII.
4485	Marston, William P.	Tobacco, machinery for rolling.	Sept. 12, 1846.	XXII.
4831	Martin, Benjamin G.	Tailors' measures.	April 25, 1846.	XXI.
4779	Mason, William.	Mules, self-acting.	Oct. 29, 1846.	III.
4799	Masser, H. B.	Washing machines.	Oct. 3, 1846.	XVII.
4482	May, Harvey H.	Ploughs.	Oct. 7, 1846.	I.
			April 25, 1846; antedated Jan. 27, '46.	

4609	May, Harvey H.....	Ploughs, machinery for swedging mould-boards, &c., for.....	June 27, 1846.....	I.
4493	May, John M.....	Ploughs.....	May 2, 1846.....	I.
4766	Mayfield, Isaac.....	Straw cutters.....	Sept. 19, 1846.....	I.
4544	Meech, Charles L.....	Plough clevises.....	May 28, 1846.....	XIV.
4769	Mellish, Henry.....	Blocks, tail, self-setting.....	Sept. 19, 1846.....	XIV.
4739	Merrill, Horace.....	Saw logs, setting.....	Sept. 3, 1846.....	XX.
4825	Merriman, Joel B.....	Pessaries.....	Oct. 24, 1846.....	XIV.
4674	McBurth, Augustus, assignor to T. R. Hibbard.....	Veneering.....	July 25, 1846.....	X.
4886	McCammon, William.....	Brakes for car wheels.....	Dec. 12, 1846; antedated June 12, '46.....	VII.
4529	McConnell, William P.....	Propellers in vessels.....	May 16, 1846.....	III.
4638	McCully, John.....	Hemp spinning.....	July 14, 1846.....	XIV.
4955	McGill, Lott.....	Planing slats, machinery for.....	Feb. 5, 1847; antedated Nov. 27, '46.....	II.
4854	McKay, Melvin.....	Tuyeres.....	Nov. 14, 1846.....	XVIII.
4838	McKinzie, Alexander D.....	Printing in colors.....	Nov. 6, 1846.....	II.
4495	McLean, William S.....	Sash fastener, window.....	May 2, 1846.....	II.
4855	McMillen, Daniel C.....	Tuyeres.....	Nov. 14, 1846.....	IV.
4790	Michiels, George.....	Sugar making.....	Oct. 3, 1846.....	XI.
4513	Millard, J. K.....	Water wheels, regulating and directing water upon.....	May 9, 1846.....	V.
4525	Miller, Ezra L.....	Warming buildings, hot water apparatus for.....	July 7, 1846.....	V.
4626	Miller, Ezra L.....	Furnaces, boiler.....	July 7, 1846.....	VI.
4776	Miller, James.....	Steam engines, rotary.....	Sept. 26, 1846.....	X.
4667	Miller, Moses.....	Sleighs.....	July 28, 1846.....	XV.
4676	Miller, Samuel, and G. Roller.....	Clay, tempering.....	July 31, 1846.....	II.
4768	Moore, George R.....	Copper, &c., sheet, double seaming.....	Sept. 19, 1846.....	V.
5098	Morehouse, B., & W. W. Willard.....	Stoves, cooking.....	May 1, 1847; antedated Dec. 18, '46.....	V.
4689	Morris, Joseph R.....	Furnaces, hot-air.....	Aug. 12, 1846.....	XIV.
4395	Morrison, Russell S., & B. B. Cushing.....	Saw mills.....	Mar. 7, 1846.....	XXI.
4494	Morse, Joel R.....	Tortoise shell, &c., machinery for dressing.....	May 2, 1846.....	V.
4522	Morse, Laban, and W. T. Lewis.....	Stoves for fine fuel.....	May 16, 1846.....	III.
4707	Moulton, Peter.....	Netting machines.....	Aug. 22, 1846.....	XI.
4844	Munger, Hiram.....	Water wheels.....	Nov. 10, 1846.....	XIV.
4695	Munsell, James.....	Mortising machines.....	Aug. 12, 1846.....	II.
5693	Muntz, George F.....	Metal, composition for sheathing.....	Aug. 1, 1848; in England, Oct. 15, '46.....	I.
4805	Murray, James.....	Corn shellers.....	Oct. 7, 1846.....	IX.
5172	Nasmyth, James.....	Pile drivers, steam.....	June 26, 1847; in England, Sept. 17, 1846.....	III.
5008	Needham, Rozell.....	Cotton, machinery for cleaning.....	Mar. 13, 1847; antedated Dec. 21, '46.....	XVII.
4703	Needham, John.....	Bedstead, sofa.....	Aug. 7, 1846.....	V.
4826	Nims, Warren.....	Boilers for heating liquids.....	Oct. 24, 1846.....	II.
4772	Norton, Benjamin.....	Hoop iron, machinery for rolling.....	Sept. 26, 1846.....	V.
4614	Norton, George M.....	Stoves, cooking.....	July 2, 1846.....	III.
4480	Norton, Joshua, jr.....	Sized paper, mode of drying.....	April 25, 1846.....	XVII.
4434	Nuckols, H. P.....	Bedsteads and chairs, machinery for cutting screws, &c., for.....	April 4, 1846.....	III.
4642	Obenchain, M. W.....	Carding machines.....	July 20, 1846; antedated Jan. 20, '46.....	IX.
4433	Ogden, James, & D. R. Hart.....	Windows, carriage.....	Mar. 21, 1846.....	VI.
4588	Olney, H., D. G. Raven & J. H. Whelpley.....	Steam, induction and eduction of.....	June 20, 1846.....	XI.
4440	Ostrander, Jonathan F.....	Cocks, filtering.....	April 4, 1846.....	XIII.
4478	Ostrander, Jonathan F.....	Mills, grinding.....	April 25, 1846.....	XIV.
4387	Otis, Benjamin H.....	Mortising machines.....	Feb. 20, 1846.....	IX.
1089	Otis, William S.....	Crane excavator, for excavating and removing earth.....	Feb. 24, 1839.....	I.
4551	Owen, Edwin.....	Cutters, cane.....	May 30, 1846.....	XI.
4798	Owen, Orlando.....	Cisterns, apparatus for constructing.....	Oct. 7, 1846.....	XVII.
4880	Pace, Henry, sen.....	Bedsteads.....	Dec. 10, 1846.....	

Persons whose patents for inventions have expired.

No.	Patentee.	Invention or discovery.	Date of patent.	Class.
4786	Paine, Henry M.	Glass lens.	Oct. 3, 1846	VIII.
4379	Palmer, Arnold.	Temples, weavers.	Feb. 10, 1846	III.
4797	Pasmore, William H.	Furnaces, tempering.	Oct. 7, 1846	II.
4577	Pawling, Abraham.	Stirrups, safety.	June 16, 1846	II.
4863	Payson, Burch & Davis.	Stoves, cooking.	Nov. 24, 1845	V.
4628	Pease, Dan., jr.	Buckwheat, machines for cleaning.	July 14, 1846	I.
4647	Peebles, Jacob.	Cisterns, brick.	July 20, 1846	XI.
4435	Percival, David.	Railroad gates.	April 4, 1846	IX.
4537	Perrins, John.	Looms, Jacquard.	May 28, 1845	III.
4800	Perry, Stuart.	Gas engines.	Oct. 7, 1846	VI.
4562	Peters, Jacob.	Cap spinner.	June 6, 1846	III.
4612	Philleo, Luther.	Piano-fortes.	July 2, 1846	XVIII.
4885	Peirce, Hosea.	Cigars, machine for making.	Dec. 10, 1846	XXII.
4598	Pierce, Samuel.	Stoves.	June 27, 1846	V.
4383	Pirson, Joseph P., jr.	Boilers, steam, feeding and condensing.	Feb. 10, 1846	VI.
4830	Pond, Moses.	Ranges, cooking.	Oct. 29, 1846	V.
4423	Pratt, William A.	Daguerreotype pictures, coloring.	Mar. 14, 1846	XVIII.
4847	Pray, Joseph, and C. Stafford.	Frames, drawing.	Nov. 12, 1846	III.
4405	Putnum, James.	Seed planters.	Mar. 7, 1846	I.
4406	Pye, Francis B.	Locks, permutation.	Mar. 7, 1846	II.
4858	Rand, Luke S.	Straw cutters.	Nov. 18, 1846	I.
4872	Randall, Charles.	Harpoons.	Dec. 3, 1846	XXII.
4448	Ransom, Joel L.	Brick presses.	April 4, 1846	XV.
4894	Ray, Fowler M.	Wheels, car.	Dec. 17, 1846	X.
4534	Read, William.	Faucets, machinery for reaming.	May 23, 1846	XI.
4824	Read, William.	Cocks, filtering and stop.	Oct. 24, 1846	XI.
4657	Reed, Almos L.	Nail plates, feeding.	July 24, 1846	II.
4436	Remington, John R.	Carriages, one-wheeled, attaching horses to.	April 4, 1846	X.
4523	Remington, John R.	Andirons.	May 16, 1846	II.
4539	Remington, John R.	Ditching machines.	May 28, 1846	IX.
4590	Remington, John R.	Horse power.	June 20, 1846	XIII.
4731	Remington, John R.	Stump extractors.	Sept. 3, 1846	I.
4904	Remington, John R.	Coffee pots.	Dec. 22, 1846	XVII.
4580	Renfrew, John.	Pumps for raising water.	June 16, 1846	XI.
4663	Reynolds, H. D.	Smut machines.	July 28, 1846	XIII.
4351	Rich, Joseph C.	Straw cutters.	Jan. 7, 1846	I.
4781	Richards, James.	Pistons, steam.	Oct. 3, 1846	VI.
4374	Richardson, Israel J.	Horse powers, portable.	Feb. 10, 1846	XIII.
4384	Richardson, Israel J.	Straw cutters.	Feb. 10, 1846	I.
4879	Rillieux, Norbert.	Sugar making.	Dec. 10, 1846	IV.
4569	Robbins, Zenas C.	Brakes for carriages, self-acting.	June 13, 1846	X.
4746	Rodgers, John F.	Trucks, railroad.	Sept. 5, 1846	X.
4710	Roebling, John A.	Bridges, suspension, chains for anchoring.	Aug. 26, 1846	IX.
4811	Rogers, Charles H., and S. H. Hancox.	Stoves.	Oct. 10, 1846	V.
4870	Rorabaugh, James.	Ploughs, hillside.	Dec. 3, 1846	I.

1396	Roth, Augustus	Improvement in the construction of furnaces for smelting iron ore.....	Oct. 31, 1839.....	II
4843	Rowand, Thomas	Tide mills.....	Nov. 10, 1846.....	XI.
4623	Russell, Jonathan	Boot trees.....	July 7, 1846; antedated July 4, '46.	XVI.
4428	Rust, Samuel.....	Lamps, wick tubes for.....	Mar. 21, 1846; antedated Jan. 29, '46.	V.
4794	Rylander, William J.....	Straw cutters.....	Oct. 3, 1846.....	I.
4355	Sabin, Harvey W.....	Beehives.....	Jan. 15, 1846.....	I.
4810	Sabin, Harvey W.....	Windlasses.....	Oct. 10, 1846; antedated Sept. 9, '46.	XI.
4698	Sample, Smiley H.....	Hemp brakes.....	Aug. 18, 1846.....	III.
4673	Saunders, David, sen., James G. Bissett, and Sam. Saunders.	Tires for car wheels, manufacture of.....	July 28, 1846.....	II.
4874	Schœnbein, Christian F., assignor to W. H. Robertson.....	Cotton, wool, and other substances as substitutes for gunpowder, preparation of.....	Dec. 5, 1846; in England Oct. 8, '46.	XIX.
4832	Scriber, John.....	Piano-fortes.....	Oct. 29, 1846.....	XVIII.
4791	Schrock, John M., and John G. Fischer	Clocks.....	Oct. 3, 1846.....	VIII.
4575	Scofield, George S.....	Bookbinders' boards, machinery for cutting.....	June 16, 1846.....	XVIII.
4792	Sedgwick, W., and John Brooks.....	Fruit gatherers.....	Oct. 3, 1846.....	I.
4367	Seger, Hiram	Dresses, cutting ladies'.....	Jan. 28, 1846.....	XXI.
4641	Shaw, Jacob, jr.....	Door springs.....	July 20, 1846.....	II.
4592	Shaw, William.....	Stoves, cooking.....	June 27, 1846.....	V.
4905	Shepard, Benjamin.....	Stoves, air-heating.....	Dec. 22, 1846.....	V.
4648	Shermer, Jacob	Winnowing machines.....	July 20, 1846.....	I.
4644	Sherwood, William.....	Carpet looms.....	July 20, 1846.....	III.
4388	Shorb, John.....	Valves, safety, mode of operating.....	Feb. 20, 1846.....	VI.
5048	Shugert, John, and George W. Porter	Washing machines.....	Apr. 3, 1847; antedated Nov. 2, '46.	XVII.
4899	Silver, J. S.....	Stoves, cooking.....	Dec. 22, 1846.....	V.
4481	Simpson, John	Brick, machines for making.....	Apr. 25, 1846.....	XV.
4618	Simpson, John.....	Pulleys, band.....	July 7, 1846.....	XXII.
4486	Singleton, William Y.....	Hominy, making.....	Apr. 25, 1846.....	XIII.
4535	Singleton, William Y.....	Ditching machines.....	May 28, 1846.....	IX.
4809	Slack, Isaac.....	Axles, carriage.....	Oct. 10, 1846.....	X.
4559	Slade, Henry	Stoves.....	June 6, 1846.....	V.
4835	Slaughter, James.....	Chimneys, machines for cleaning.....	Nov. 4, 1846.....	V.
4864	Sloan, Thomas J.....	Screws, machinery for cutting the threads of pointed.....	Nov. 24, 1846.....	II.
4882	Small, Alexander	Wheels, car.....	Dec. 10, 1846.....	X.
4661	Smith, Addison.....	Magnetic fire alarms.....	July 24, 1846.....	VIII.
4712	Smith, Anthony.....	Hides, breaking and scraping.....	Aug. 26, 1846.....	XVI.
4635	Smith, David M.....	Locks for doors, &c.....	July 14, 1846.....	II.
4833	Smith, Henry W.....	Seed planters.....	Nov. 4, 1846.....	I.
4424	Smith, Isaac P.....	Blowers, fan.....	Mar. 14, 1846.....	VI.
1373	Smith, Leonard.....	Improvement in snut machines.....	Oct. 18, 1839.....	XIII.
4382	Snyder, Elisha S.....	Mill, grinding.....	Feb. 10, 1846.....	XIII.
4490	Snyder, Elisha S.....	Bolting flour.....	May 2, 1846.....	XIII.
5148	Sommers, Henry B.....	Ploughs, turf.....	June 5, 1847; antedated Dec. 5, '46.	I.
4573	Southworth, Albert S., and Jonah J. Hawes.....	Plates, apparatus for holding, for polishing.....	June 13, 1846.....	XVIII.
4564	Spencer, A. B.....	Saws, machines for dressing.....	June 6, 1846.....	II.
4711	Stafford, David G.....	Stoves, cooking.....	Aug. 26, 1846.....	V.
4910	Stafford, James R.....	Stoves, cooking.....	Dec. 28, 1846.....	V.
4561	Starr, William H.....	Lamps.....	June 6, 1846.....	V.
4524	Staub, Henry.....	Snut machines.....	May 16, 1846.....	XIII.
4650	Stevens, Joseph.....	Fences.....	July 20, 1846.....	I.
4545	Stevens, Richard F.....	Steam engines, rotary.....	May 30, 1846.....	VI.
4908	Stevens, R. F., and L. B. Pitcher.....	Machinery for ascending inclined planes.....	Dec. 28, 1846.....	IX.
4624	Stevens, William H.....	Grain cleaners.....	July 7, 1846.....	I.
4898	Stilwell, Daniel D.....	Snow plough.....	Dec. 22, 1846.....	VI.

Persons whose patents for inventions have expired.

No.	Patentee.	Invention or discovery.	Date of patent.	Class.
4803	Still, Francis N.	Castings, making moulds for.	Oct. 7, 1846.	II.
4882	Stillman, Alfred.	Sugar cane, machinery for crushing.	Aug. 8, 1846.	XIII.
4516	Stimpson, H. H.	Ranges, cooking, backs of.	May 16, 1846.	V.
4431	Stratton, B. F., assignor to B. C. Everett.	Trusses.	Mar. 21, 1846.	XX.
4489	Street, John.	Lamps.	May 2, 1846.	V.
4621	Strong, T. F.	Lamps.	July 7, 1846; antedated May 1, '46.	V.
4639	Strong, Theodore F.	Lamps.	July 20, 1846.	V.
4586	Stuart, Frederick A.	Winnowing machines.	June 20, 1846.	I.
4518	Sullivan, John L.	Supporters, spinal.	May 16, 1846.	XX.
4474	Summers, Ralph.	Water wheels.	April 25, 1846.	XI.
4393	Sweney, George.	Saw mills.	Mar. 7, 1846.	XIV.
4715	Swett, Samuel, jr.	Spark arresters.	Aug. 26, 1846.	VI.
4793	Taylor, William.	Boot crimps.	Oct. 3, 1846.	XVI.
4727	Teepie, Andrew H.	Metallic sheathing, machinery for punching.	Aug. 28, 1846.	II.
4888	Thatcher, George H.	Tires, setting, upon wheels.	Dec. 12, 1846.	X.
4690	Thayer, Edwin.	Brakes for cars.	Aug. 12, 1846.	X.
5104	Thomson, Robert W.	Wheels, carriage.	May 8, 1847; antedated Oct. 21, '46.	X.
4751	Thraikill, Samuel.	Ditching machines.	Sept. 10, 1846.	IX.
4705	Tieman, George.	Scarificator.	Aug. 20, 1846.	XX.
4845	Timby, Theodore R.	Water wheels.	Nov. 10, 1846.	XI.
4893	Tippett, Edward D.	Washing machines.	Dec. 17, 1846.	XVII.
4909	Tippett, Edward D.	Meat cutters.	Dec. 28, 1846.	XVII.
4381	Tittle, John.	Cars, safety, for inclined planes.	Feb. 10, 1846.	X.
4506	Todd, Hiram.	Turnkey, dentist's.	May 9, 1846.	XX.
4594	Tomlinson, Russell.	Straw carriers.	June 27, 1846.	I.
4654	Townsend, Tappan.	Warming railroad cars.	June 24, 1846.	V.
4889	Tracy, Oren.	Axles for carriages.	July 12, 1846.	X.
4589	Treadwell, Daniel.	Cannon, machinery for welding and forming wrought iron.	Dec. 12, 1846.	XIX.
4804	Treadwell, William B.	Stoves, cooking.	June 20, 1846.	V.
4511	Tyler, Philos B.	Switch, safety, for railroads.	Oct. 7, 1846.	IX.
4632	Van Derveer, B. M.	Arithmetic, teaching.	May 9, 1846.	XXII.
4605	Vasser, Matthew.	Vent plugs.	June 27, 1846.	XI.
4404	Vaughan, J. K., & E. H. Everman.	Soap, manufacture of.	Mar. 7, 1846.	IV.
4497	Vetter, Andrew.	Shoes, over.	May 2, 1846.	XVI.
4875	Vine, William.	Knives, machinery for polishing.	Dec. 5, 1846.	II.
4881	Vogel, Kasimer.	Weavers' harness.	Dec. 10, 1846.	III.
4560	Von Schmidt, Peter.	Timber, impregnating, for preserving.	June 6, 1846.	IV.
4817	Von Schmidt, Peter.	Gins, cotton.	Oct. 17, 1846.	III.
4780	Wade, James T.	Straw cutters.	Oct. 3, 1846.	I.
4842	Wagner, Hugh K.	Docks, dry.	Nov. 10, 1846.	IX.
4759	Walley, Samuel S.	Dam, coffer.	Sept. 15, 1846.	IX.
4619	Warner, Chapman.	Pumps for raising water.	July 17, 1846.	XI.
4479	Warren, Josiah.	Stereotype plates, composition for.	April 25, 1846.	XVIII.
4868	Watson, Peter H.	Screws, machinery for cutting.	Dec. 3, 1846.	II.
4378	Webb, Joseph W.	Straw cutters.	Feb. 10, 1846.	I.

4398	Weller, Pliny.....	Threshing machines.....	Mar. 7, 1846.....	I.
4836	Wells, Horace.....	Baths, shower.....	Nov. 4, 1846.....	XX.
4500	Wells, Moses D.....	Ploughs, shovel.....	May 9, 1846.....	I.
4570	Welty, George.....	Hides, working.....	June 13, 1846.....	XVI.
4437	Wenman, Thomas F.....	Cocks, filtering.....	April 4, 1846.....	XI.
8275	Wetterstedt, Charles, assignor to C. Kenan.....	Paint, metallic alloy.....	Aug. 5, 1851; in England, Nov. 3, '46	IV.
4454	Wheeler, Charles.....	Lamps, light-house.....	April 11, 1846.....	V.
4892	Wheeler, Hiram F.....	Spinning wheels.....	Dec. 15, 1846.....	III.
4640	Whetstone, John L.....	Locks, door.....	July 20, 1846.....	II.
4753	Whitcomb, William.....	Beehives.....	Sept. 19, 1846.....	I.
4444	Whitman, Lorin M.....	Rakes, horse, spring tooth.....	April 4, 1846.....	I.
4430	Whiton, Simeon.....	Beer making, vegetable.....	Mar. 21, 1846.....	IV.
4828	Wiatt, H. C.....	Carriages, detaching horses from.....	Oct. 29, 1846.....	X.
4643	Wildman, Russell.....	Hat bodies, machinery for forming.....	July 20, 1846.....	XXI.
4416	Williams, Denison.....	Dyeing hair, wools, &c.....	Mar. 14, 1846.....	IV.
4734	Wilson, Alexander M.....	Mowing machines.....	Sept. 3, 1846.....	I.
4891	Wilson, Edwin D.....	Washing machines.....	Dec. 15, 1846.....	XVII.
4509	Wilson Samuel.....	Harness, bridles, &c., machine for the manufacture of.....	May 9, 1846.....	XVI.
4730	Wilt, Samuel.....	Plough clevis.....	Sept. 3, 1846.....	I.
4808	Wilt, Samuel C.....	Lanterns for destroying insects.....	Oct. 7, 1846.....	XXII.
4665	Winans, Ross.....	Locomotive carriages.....	July 28, 1846.....	VI.
4812	Winans, Ross.....	Locomotive carriages.....	Oct. 14, 1846.....	VI.
5179	Winder, Daniel.....	Raising water.....	June 26, 1847; antedated Dec. 27, '46.	XI.
4532	Wing, William G.....	Furnaces, hot-air.....	May 23, 1846.....	V.
4890	Winrott, Samuel.....	Stoves, cooking.....	Dec. 15, 1846.....	V.
4787	Winslow, James M.....	Lath cutting machine.....	Oct. 3, 1846.....	XIV.
4526	Winslow, John F.....	Malleable iron, mode of manufacturing, directly from the ores.....	May 16, 1846.....	II.
4465	Witherow, Samuel.....	Ploughs.....	April 18, 1846.....	I.
4599	Wolcott, A. S., deceased, (Waring & Peterson, adm'rs).....	Ranges, kitchen.....	June 27, 1846.....	V.
4683	Wolcott, A. S., deceased, (Waring & Peterson, adm'rs,) & John Johnson.....	Spinning, machinery for.....	Aug. 8, 1846.....	III.
4719	Wood, Loftus.....	Stoves, cooking.....	Aug. 25, 1846.....	V.
4722	Wood, Loftus.....	Stoves.....	Aug. 28, 1846.....	V.
4630	Woodbridge, W. E.....	Locks for doors.....	July 14, 1846.....	II.
4718	Woodbury, Daniel.....	Horse power.....	Aug. 25, 1846.....	XIII.
4691	Woodcock, Bancroft.....	Stoves, cooking.....	Aug. 12, 1846.....	V.
5064	Woodcroft, Bennett.....	Printing calico.....	Apr. 17, 1847; in England, June 22, '46	III.
4721	Woodworth, Arad, 3d.....	Planing blind slats, machinery for.....	Aug. 26, 1846.....	XIV.
4420	Yates, William Dennis Dolan.....	Cements, fire and water proof.....	Mar. 14, 1846.....	IV.
4591	Yeaman, Stephen M.....	Winnowing machines.....	June 20, 1846.....	I.

ALPHABETICAL LIST OF PERSONS WHOSE PATENTS FOR DESIGNS HAVE EXPIRED DURING THE YEAR 1860.

No.	Patentee.	Design.	Date.
607	Ames, W., assignor to Hartshorne, Ames & Co.	Stove, parlor	November 1, 1853.
612	Ames, W., assignor to Hartshorne, Ames & Co.	Stove, cooking	December 24, 1853.
548	Ball, Thomas	Bust of Daniel Webster	April 19, 1853.
590	Ball, Thomas, assignor to G. W. Nichols	Statue of Daniel Webster	August 9, 1853.
586	Barry, Thomas, assignor to North, Chase & North	Stove, cooking	July 26, 1853.
598	Barth, John H.	Bedstead	October 5, 1853.
587	Bates, Reuben H. N., assignor to North, Chase & North	Range, cooking	July 26, 1853.
553	Beesley, Jacob, assignor to W. P. Cresson & Co.	Stove, cooking	April 19, 1853.
571	Bolton, E., assignor to A. and J. Cox	Stove, cook	June 21, 1853.
550	Chinnock, Charles	Clock-case front	April 19, 1853.
551	Chinnock, Charles	Clock-case front	April 19, 1853.
552	Chinnock, Charles	Clock-case front	April 19, 1853.
577	Cowles, James, assignor to Albert G. Bristol	Register face	June 28, 1853.
569	Davy, John T.	Stove, cook	June 21, 1853.
556	Deitz, Robert E.	Grandoles, candelabra, &c.	April 27, 1853.
581	Dulley, J. J., assignor to Johnson, Cox & Fuller	Stove, cooking	July 19, 1853.
547	Edmonds, Alexander	Cradle	February 22, 1853.
568	Gallagher, A. J., and John J. Baker	Stove, cooking	May 31, 1853.
589	Gerould, A., and J. H. Ward	Sewing bird	August 3, 1853.
596	Gibbs, S. W., assignor to North, Chase & North	Stove	September 6, 1853.
604	Gillies, Theodore I.	Coffins, metallic	October 11, 1853.
597	Gray, William P., assignor to A. and J. Cox	Stove, cooking	September 6, 1853.
556	Hill, Jeremiah	Combs for ladies' hair	April 27, 1853.
565	Holzer, J., assignor to J. G. Abbott and A. Lawrence	Stove, cooking	May 10, 1853.
588	Holzer, Julius, assignor to North, Chase & North	Stove, cooking	August 3, 1853.
599	Holzer, Julius, assignor to North, Chase & North	Stove, cooking	October 5, 1853.
584	Huntley, Hosea H., assignor to Daniel F. Goodhue	Stove	July 26, 1853.
585	Huntley, Hosea H., assignor to Daniel F. Goodhue	Stove, cooking	July 26, 1853.
602	Huntley, Hosea H., assignor to Daniel F. Goodhue	Stove, cooking	October 5, 1853.
560	Jackson, James L.	Grate frame	May 3, 1853.
561	Jackson, James L.	Grate frame	May 3, 1853.
562	Jackson, James L.	Grate frame	May 3, 1853.
563	Jackson, James L.	Grate frame and summer piece	May 3, 1853.
540	Jewett, S. S., and F. H. Root	Stove, cooking	January 25, 1853.
541	Jewett, S. S., and F. H. Root	Stove, wood	January 25, 1853.
542	Jewett, S. S., and F. H. Root	Stove, cooking	January 25, 1853.
543	Lamb, Joseph G., assignor to A. Bradley	Stove, cooking	January 25, 1853.
610	Lane, John	Sewing butterfly	November 8, 1853.
549	Manigle, E. M., and George Phipps	Water cooler	April 19, 1853.
580	Mason, John, assignor to Isaac H. Holden, agent High Street Furnace Company	Stove, cooking	July 19, 1853.
611	Moore, Simon F.	Stove, cooking	November 29, 1853.
593	Palmer, P. A.	Milk stool frame	August 30, 1853.
579	Pierce, Samuel, and J. J. Dulley, assignors to Johnson, Cox & Fuller	Stove, cook	July 12, 1853.
544	Pratt, Joseph, assignor to Bowers, Pratt & Co	Stove, cooking	January 25, 1853.
606	Read, Joseph R., assignor to William W. and C. M. Atkins	Register	October 25, 1853.

605	Richardson, N. P.	Stoves, cooking.	November 1, 1853.
608	Ripley, E., and N. S. Vedder, assignors to G. W. Eddy	Stove, parlor	November 8, 1853.
566	Robinson, Edward F.	Stove, cooking	May 10, 1853.
570	Saby, John, jr., assignor to James K. Griffin.	Stove, cooking	June 21, 1853.
554	Sailor, Samuel H., assignor to C. W. Warnick and Frederick Leibrandt	Stove, cooking	April 19, 1853.
558	Sailor, Samuel H., assignor to C. W. Warnick and F. Leibrandt	Stove, cooking	April 27, 1853.
564	Sailor, Samuel H., assignor to J. G. Abbott and A. Lawrence	Stove, cooking	May 10, 1853.
592	Sailor, S. H., assignor to Abbott & Lawrence.	Stove.	August 23, 1853.
594	Schultz, Frederick, assignor to C. and S. Gilbert	Stove, cook.	August 30, 1853.
583	Smith, Elihu.	Stove, parlor.	July 26, 1853.
557	Smith, G., and H. Brown, assignors to North, Chase & North	Range, portable	April 27, 1853.
595	Smith, G., and H. Brown, assignors to Abbott & Lawrence	Stove, parlor	August 30, 1853.
601	Smith, G., and H. Brown, assignors to North, Chase & North	Stoves	October 5, 1853.
603	Smith, Garretson, and Henry Brown, assignors to C. W. Warnick and F. Leibrandt.	Stoves	October 5, 1853.
559	Smith, John C., assignor to C. W. Warnick and Frederick Leibrandt.	Range, portable	October 5, 1853.
600	Tryday, G. H., assignor to North, Chase & North	Stoves	April 27, 1853.
591	Van Cleve, John W., assignor to James Greer & Co	Stove, cooking	October 5, 1853.
572	Vedder, N. S.	Stove, cook.	August 17, 1853.
609	Vedder, N. S.	Stove, cooking	June 28, 1853.
567	Vose, Samuel D.	Stove, cooking	November 8, 1853.
573	Vose, Samuel D.	Stove, parlor.	May 24, 1853.
574	Vose, Samuel D.	Stove, cooking.	June 28, 1853.
575	Vose, Samuel D.	Stove, cooking.	June 28, 1853.
576	Vose, Samuel D.	Stove, cooking.	June 28, 1853.
626	Vose, Samuel D.	Stove, parlor	June 28, 1853.
627	Vose, Samuel D.	Stove, cooking.	Feb. 14, 1854; antedated Dec. 30, '53.
628	Vose, Samuel D.	Stove, cooking.	Feb. 14, 1854; antedated Dec. 30, '53.
629	Vose, Samuel D.	Stove, cooking.	Feb. 14, 1854; antedated Dec. 30, '53.
613	Wager, James, V. Richmond, and H. Smith	Stove, cooking.	Feb. 14, 1854; antedated Dec. 30, '53.
614	Wager, James, V. Richmond, and H. Smith	Stove, parlor.	December 24, 1853.
546	Waterman, Charles	Stove, coal, cylinder.	December 24, 1853.
578	Waterman, Nathaniel	Sewing bird	February 16, 1853.
		Waffle baker	July 5, 1853.

PATENTEEES OF INVENTIONS AND DESIGNS, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
28723	Abbott & Noble. (See Smith & Brown, assignors.)	North Huron, N. Y.	Churn.	June 19, 1860.
27943	Abbott, Harry.	Wakeman, Ohio.	Bolts, heading.	April 17, 1860.
30282	Abbott, Hiram, assignor to self and L. A. Lyon.	St. Louis, Mo.	Quartz crusher and amalgamator.	Oct. 9, 1860.
29212	Acker, Francis B.	Rampo, N. Y.	Hinges, spring.	July 17, 1860.
27091	Acker, Abram, assignor to J. S. Wannaker & Co.	Taliaferro county, Ga.	Planters, cotton seed.	Feb. 14, 1860.
27606	Acree, L.	Mendota, Illinois.	Plough, mole.	Mar. 27, 1860.
29347	Adair, James	Pittsburg, Pa.	Lamps.	July 31, 1860.
28544	Adair, James	Hay's Creek, Miss.	Ditching machine.	June 5, 1860.
30283	Adaire, P. W.	Philadelphia, Pa.	Copying letters, apparatus for.	Oct. 9, 1860.
	Adams, A. Lemuel.			
	Adams, C. (See J. Kinzer, assignor.)			
28337	Adams, Calvin.	Pittsburg, Pa.	Ploughs, clevis for.	May 22, 1860.
28949	Adams, Calvin.	Pittsburg, Pa.	Locks, door.	July 3, 1860.
	Adams, Chauncey. (See Lemuel Morgan, assignor.)			
	Adams, C. W., and Debby Pinner. (See Daniel H. Wis-			
	well, assignor.)			
30555	Adams, Federal C., and Joseph Peckover.	Cincinnati, Ohio.	Hinge.	Nov. 6, 1860.
26962	Adams, Henry B.	New York, N. Y.	Blowers, fan.	Jan. 31, 1860.
	Adams, H. C. (See Walsh, John J., assignor.)			
28446	Adams, Henry W.	Brooklyn, N. Y.	Coal oils, apparatus for distilling.	May 29, 1860.
	Adams, J. F., and William P. Spence. (See Walker, Syl-			
	venus.)			
27607	Adams, James W.	Pleasant Valley, Vt.	Stave machine.	Mar. 27, 1860.
30602	Adams, John, assignor to Thomas Poultney.	Dalston, England.	Fire-arms, revolving.	Nov. 6, 1860.
27283	Adams, Samuel.	Toulon, Illinois.	Plough, mole.	Feb. 28, 1860.
29655	Adams, Samuel T. and David.	Medina, Ohio.	Washing machine.	Aug. 21, 1860.
	Adams, S. B. (See Adt, John, assignor.)			
30861	Adams, Samuel W.	Moultrie county, Illinois.	Planters, corn.	Dec. 11, 1860.
28447	Adams, William.	Philadelphia, Pa.	Hair, curled, machine for picking.	May 29, 1860.
30708	Adie, William H., Preston D. Miles, and George Custer.	Norristown, Pa.	Planters, corn.	Nov. 27, 1860.
27028	Adler, George S.	Philadelphia, Pa.	Leather, machines for polishing.	Feb. 7, 1860.
26729	Adrianee, John V. S., and Joseph W. Clark, assignors to	Buffalo, N. Y.	Refrigerator.	Jan. 3, 1860.
	Adrianee & Kelly.			
30902	Adt, John, assignor to self, S. E. Davis, and S. B. Adams,	Waterbury, Conn.	Lock knob.	Dec. 11, 1860.
	assignors to William B. Barnard.			
	{ Agnew, Allan, and			
29043	{ William Morrison.	Chester county, Pa.	Cultivators.	July 10, 1860.
29329	Agnew John R.	Chadd's Ford, Pa.	Globes.	July 24, 1860.
27092	Aiken, George C.	Philadelphia, Pa.	Cultivator teeth.	Feb. 14, 1860.
27956	Aiken, George C.	Nashua, N. H.	Cultivator teeth.	April 24, 1860.
28044	Aiken, James.	Nashua, N. H.	Bales, cotton, metal ties for.	May 1, 1860.
	Aiken, Luther. (See Baldwin, Cyrus W., assignor.)	Natchez, Miss.		
29450	Aiken, Walter.	Franklin, N. H.	Knitting machines.	Aug. 7, 1860.
28643	Akins, William H., and Darius Babcock.	Dryden, N. Y.	Grain when fed to the mill and cooling the millstones, machine for cleaning.	June 12, 1860.

27675	Albertson, John R.	East Deer Township, Pa.	Hoes, garden.	April 3, 1860.
28950	Albro, Stephen	Buffalo, N. Y.	Bed cords.	July 3, 1860.
28231	Alden, Henry A., assignor to the New York Rubber Company.	Matteawan, N. Y.	Hose, or flexible tubing.	May 8, 1860.
28432	Alden, Henry A., assignor to the New York Rubber Company.	Matteawan, N. Y.	Hose, or flexible tubing.	May 22, 1860.
29348	Alden, Henry A., assignor to the New York Rubber Company.	Matteawan, N. Y.	Belt lacing.	July 31, 1860.
30032	Alden, Henry A., assignor to the New York Rubber Company.	Matteawan, N. Y.	Hose, water-proof.	Sept. 18, 1860.
27338	Aldrich, Dennis	St. Louis, Mo.	Hides, preparing.	Mar. 6, 1860.
29656	Aldrich, Dennis	St. Louis, Mo.	Tanning apparatus, construction of.	Aug. 21, 1860.
27765	Aldrich, James	Washington, D. C.	Water elevators.	April 10, 1860.
30449	Aldrich, Samuel and Alexander	Washington, D. C.	Wells, &c., devices for elevating water from.	Oct. 23, 1860.
27093	Aldrich, William L.	Atlanta, Ga.	Billiard cues, press for attaching leathers to.	Feb. 14, 1860.
29539	Alexander, Charles, assignor to self and W. C. Choate.	Washington, D. C.	Cork drawers.	Aug. 7, 1860.
28642	Alexander, Thomas J.	Westerville, Ohio.	Sewing machines, mechanism for starting.	June 12, 1860.
29646	Allen, Albert J., assignor to R. Allen.	Buffalo, N. Y.	Gauges, steam.	Aug. 14, 1860.
29228	Allen, Anthony B.	New York, N. Y.	Mowing machine.	July 24, 1860.
29451	Allen, D. D.	South Adams, Mass.	Spinning frames, tubes for.	Aug. 7, 1860.
26871	Allen, Enos G., assignor to Henry O. Allen.	Boston, Mass.	Gauges, steam.	Jan. 17, 1860.
28045	Allen, Enos G.	Boston, Mass.	Gauges, steam.	May 1, 1860.
27094	Allen, Ethan.	Worcester, Mass.	Cartridge cases, percussion, machine for making.	Feb. 14, 1860.
27415	Allen, Ethan.	Worcester, Mass.	Fire-arms, constructing.	Mar. 13, 1860.
28951	Allen, Ethan.	Worcester, Mass.	Fire-arms, revolving.	July 3, 1860.
30033	Allen, Ethan.	Worcester, Mass.	Fire-arms, breech-loading.	Sept. 18, 1860.
30109	Allen, Ethan.	Worcester, Mass.	Cartridges, metallic.	Sept. 25, 1860.
27029	Allen, Frank A.	Portsmouth, N. H.	Sewing, making plaits in.	Feb. 7, 1860.
30034	Allen, Henry O. (See Allen, Enos G., assignor.)	Fredericktown, Ohio.	Boots and shoes.	Sept. 18, 1860.
30905	Allen, James M.	Union, N. Y.	Harrows.	Dec. 18, 1860.
29555	Allen, John.	Dover, Ga.	Planters, seed.	Aug. 14, 1860.
26878	Allen, John P.	New York, N. Y.	Bed bottom.	Jan. 24, 1860.
29943	Allen, I. T.	Rindge, N. H.	Clothes dryer.	Sept. 11, 1860.
28821	Allen, O. P.	Knox, N. Y.	Washing machine.	June 26, 1860.
29452	Allen, Peter Z.	Chicago, Ill.	Locomotive engines, water heater for.	Aug. 7, 1860.
27507	Allen, Samuel F.	Niagara Falls, N. Y.	Treatment of fibrous plants.	Mar. 20, 1860.
27878	Allen, Stephen M.	Niagara Falls, N. Y.	Fibrous materials, method of reducing long staple.	April 17, 1860.
27877	Allen, Stephen M.	Niagara Falls, N. Y.	Thread and yarn, manufacture of.	April 17, 1860.
30450	Allen, T. F.	Dyersville, Iowa.	Car springs, railway, India rubber.	Oct. 23, 1860.
27608	Allen, T. F.	Dyersville, Iowa.	Car trucks, railroad, brackets for.	Mar. 27, 1860.
29751	Allen, W. H.	Brooklyn, N. Y.	Elevator for storehouses.	Aug. 28, 1860.
28724	Allen, William Henry.	Brooklyn, N. Y.	Gauge, steam pressure.	June 19, 1860.
27944	Allen, William W., and James Molyneux, assignors to themselves and John L. McKnight.	Bordentown, N. J.	Sewing machines.	April 17, 1860.
27030	Allender, John	New London, Conn.	Shoe and bag holder.	Feb. 7, 1860.
27339	Allison, John	St. Martinsville, La.	Cane coverers.	Mar. 6, 1860.
26730	Allison, William C., assignor to self and John Murphey.	Philadelphia, Pa.	Cars, city railroad.	Jan. 3, 1860.
28530	Allison, William C., assignor to self and Murphey.	Philadelphia, Pa.	Cars, city railroad.	May 29, 1860.

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
30110	Allsatta, R. (See Long, John M., assignor.)	Carthage, Me.	Faucets	Sept. 25, 1860.
28433	Alrich, Levi L.	Middletown, Conn.	Gun stocks	May 22, 1860.
29213	Alsop, Charles R., assignor to J. W. Alsop.	Middletown, Conn.	Fire-arms, revolving.	July 17, 1860.
29538	Alsop, Charles R., assignor to Joseph W. Alsop.	Middletown, Conn.	Fire-arms, revolving, rammer for.	Aug. 7, 1860.
29752	Alsop, Charles R., assignor to J. W. Alsop.	Middletown, Conn.	Seeding machines.	Aug. 28, 1860.
30189	Alsop, J. W. (See Alsop, Charles R., assignor.)	Clinton, Ill.		
30381	Alvord, J. D.	Bridgeport, Conn.	Emery wheels, making.	Oct. 2, 1860.
29944	Ambrose, Joshua E.	Batavia, Ill.	Lamps	Oct. 16, 1860.
	American, Sampson.	Chicago, Ill.	Composition for toilet.	Sept. 11, 1860.
	Ames, H. O. (See Jones, John M., assignor.)			
	Ames, H. O. (See Gilbert, W. H., assignor.)			
30443	Ames, H. O., assignor to self and F. W. Ames.	New Orleans, La.	Evaporating pans	Oct. 16, 1860.
29430	Ames, Nathan, assignor to self and Edwin M. Montague.	Saugus Centre, Mass.	Door plate index.	July 31, 1860.
29945	Ames, S. C.	Washington, Ark.	Cotton cleaners.	Sept. 11, 1860.
	Amoskeag Manufacturing Co. (See Bean & Collins, assignors.)			
26642	Anable, Alexander.	Middlesex, N. Y.	Planters, corn.	Jan. 3, 1860.
	Anderson, E. H., and S. B. Hopkins. (See Hopkins & Anderson.)			
27676	Anderson, Edward H.	Easton, Md.	Burners, vapor.	April 3, 1860.
26823	Anderson, James S. (See Somes, D. E., assignor.)	Painesville, Ohio.	Saws, method of hanging reciprocating.	Jan. 17, 1860.
30709	Anderson, Leonard.	Easton, Md.	Cultivators	Nov. 27, 1860.
27195	Anderson, James H. and Edward H.	Brooklyn, N. Y.	Hulling and finishing rice, machine for.	Feb. 21, 1860.
28245	Anderson, Robert.	St. Louis, Mo.	Jacks, lifting.	May 15, 1860.
30277	Anderson, W. Clare.	Brooklyn, N. Y.	Binding engravings, &c.	Oct. 2, 1860.
27416	Andrews, William T., assignor to self and H. S. Archer.	Palo Alto, Pa.	Lubricating journals.	Mar. 13, 1860.
28725	Andrews, Edward, and John H. Carr.	Palo Alto, Pa.	Lubricating journals.	June 19, 1860.
30190	Andrews, Edward, and John H. Carr.	Elmira, N. Y.	Saws, circular, grinding.	Oct. 2, 1860.
26643	Andrews, John.	Antrim, Ohio.	Seat and cane, combination of.	Jan. 3, 1860.
28545	Andrews, Joseph K.	Lawrence, Mass.	Car truck, railroad, swinging bolsters for.	June 5, 1860.
28546	Andrews, Manzies C.	Columbia, Tenn.	Heater, sad iron.	June 5, 1860.
30608	Andrews, William J.	Geneva, N. Y.	Water from wells, apparatus for drawing.	Nov. 13, 1860.
29044	Andrus, Elliot.	Bellevue, Mich.	Buildings from fire, apparatus for protecting.	July 10, 1860.
29842	Andrus, Sylvester M.	New Orleans, La.	Cane covers.	Aug. 28, 1860.
28822	Angamar, E. H., assignor to self and Tobias Marcus.	Clermont, Iowa.	Hay, unloading.	June 26, 1860.
30652	Angell, H. H.	Pawtucket, R. I.	Looms for weaving hair cloth.	Nov. 13, 1860.
	Angell, Isaac, assignor to the Pawtucket Hair Cloth Company.			
27183	Angier, G. M. (See English, Luzon C., assignor.)	Philadelphia, Pa.	Knitting machine.	Feb. 14, 1860.
	Appleton, Charles J., assignor to B. H. Howell and John Cotton.			
30862	Apperly, William, and Calvin P. Johnson.	Memphis, Tenn.	Harvesters, cotton.	Dec. 11, 1860.
30791	Apple, Solomon H., Benjamin Lindhelm, and Henry Baer.	New York, N. Y.	Hats, apparatus for shaping.	Dec. 4, 1860.
	Archer, H. S. (See Anderson, William T., assignor.)			

29657	Argerbight, Daniel	Gratts, Ohio	Countersink, adjustable	Aug. 21, 1860
1215	Armitage, Samuel	St. Louis, Mo.	Trade mark for neuralgic pills	April 3, 1860
28547	Armour, John	Helena, Ark.	Saws, sharpening	June 5, 1860
27677	Armstrong, Edward	Pittsburg, Pa.	Valves of steam engines, governor	April 3, 1860
27340	Armstrong, John	New Orleans, La.	Boilers, steam	Mar. 6, 1860
30191	Armstrong, Horatio G.	Philadelphia, Pa.	Paper bag machine	Oct. 2, 1860
28046	Arnall, William M.	Sperryville, Va.	Separators and cleaners, grain	May 1, 1860
29658	Arndt, Daniel	Zanesville, Ohio	Beehives	Aug. 21, 1860
30035	Arndt, E. G. F.	Rondout, N. Y.	Lock, portable door	Sept. 18, 1860
30451	Arnold, Francis	Middle Haddam, Conn.	Clothes squeezers	Oct. 23, 1860
28244	Arnold, George B.	New York, N. Y.	Ruffles	May 8, 1860
28139	Arnold, George B.	New York, N. Y.	Sewing machines	May 8, 1860
29339	Arnold, George B., Abby H. Price, and Abby S. Urner, assignors to themselves and A. & J. S. Arnold.	New York, N. Y.	Fluting apparatus	July 24, 1860
30111	Arnold, George B.	New York, N. Y.	Ruffles, manufacture of	Sept. 25, 1860
30112	Arnold, George B. & Alfred	New York, N. Y.	Sewing machines	Sept. 25, 1860
28952	Arnold, Ithiel S.	South Milan, Ind.	Presses, hay	July 3, 1860
30661	Arnold, Russell	Hartford, Conn.	Corn balls, parched, machine for moulding	Nov. 20, 1860
28548	Arnold, T. G.	New York, N. Y.	Drop light joints	June 5, 1860
29045	Arrowsmith, George	Lockport, N. Y.	Separators, grain	July 10, 1860
27876	Arthur, William C.	Baltimore, Md.	Oil cans	April 10, 1860
29132	Arvin, John N., and Samuel H. Perkins	Valparaiso, Ind.	Axletrees, setting	July 17, 1860
27678	Asay, A. Merritt, and J. Lambert Asay	Philadelphia, Pa.	Teeth, artificial, method of fastening	April 3, 1860
28953	Asboth, Alexander	New York, N. Y.	Roofing and cement, composition for	July 3, 1860
29659	Ash, Jacob B.	Elkton, Md.	Grubbing machines	Aug. 21, 1860
27341	Ashcroft, Edward H.	Boston, Mass.	Boilers, steam, pressure gauge for	Mar. 6, 1860
28549	Ashcroft, E. H. (See Parker, J. H., assignor.)	Boston, Mass.	Gases, apparatus for naphthalizing	June 5, 1860
27508	Ashcroft, John	Lynn, Mass.	Boilers, steam, low water safety apparatus for	Mar. 20, 1860
29349	Ashenfelder, Josiah	Philadelphia, Pa.	Cars, railroad, journal box for	July 31, 1860
30284	Ashenfelder, Josiah	Philadelphia, Pa.	Railroad cars from one track to another, transferring	Oct. 9, 1860
28047	Ashley, Frederick	New York, N. Y.	Egg beater	May 1, 1860
29936	Ask, Justus, assignor to James H. Case	Lyons, N. Y.	Dental chairs, construction of	Sept. 4, 1860
30556	Atherton, Charles E.	Paterson, N. J.	Lamp, vapor	Nov. 6, 1860
28048	Atherton, S. F.	Fitchburg, Mass.	Hoops, machine for splitting	May 1, 1860
30609	Atherton, S. F.	Fitchburg, Mass.	Hoop machines	Nov. 13, 1860
27196	Atkins, S. R., and J. R. Hitchcock, assignors to J. R. Hitchcock.	Plantsville, Conn.	Sausage filler	Feb. 21, 1860
30906	Atkins, Elias C.	Indianapolis, Ind.	Saws, method of attaching handles to	Dec. 18, 1860
27766	Atkinson, C.	Vermont, Ill.	Ploughs, seeding	April 10, 1860
30036	Atkinson, W. B.	Plymouth, Ill.	Ploughs, mole	Sept. 18, 1860
30662	Atterbury, Thomas B. & James S.	Pittsburg, Pa.	Fruit jars, covers for	Nov. 20, 1860
27342	Atwater, J. B.	Ripon, Wis.	Fire-arms, rifled	Mar. 6, 1860
30907	Atwood, E. G.	Derby, Conn.	Skirts, skeleton	Dec. 18, 1860
28140	Atwood, James E.	Bucksport, Me.	Pumps	May 8, 1860
27768	Atwood, Luther	New York, N. Y.	Distillation of coal oils, apparatus for	April 10, 1860
27767	Atwood, Luther	New York, N. Y.	Distillation of hydro-carbon oils	April 10, 1860
28246	Atwood, Luther	New York, N. Y.	Coal oils, construction of apparatus for redistillation of	May 15, 1860
28448	Atwood, Luther	New York, N. Y.	Coal oil, manufacture of	May 29, 1860
30710	Aultman, C. & Co. (See Brown, C. B., assignor.) Austin, C. N., and Thomas Board. (See Board & Austin.)	East Liberty, Ohio	Carts, water	Nov. 27, 1860

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
28954	Austin, William.....	Philadelphia, Pa.....	Buildings, attaching water pipes to.....	July 3, 1860.
30037	Avery, Austin.....	South Windham, Conn.....	Vehicles, mode of attaching horses to.....	Sept. 18, 1860.
28350	Avery, Cyrus.....	Tunkhannock, Pa.....	Horse powers, &c., gearing for.....	June 5, 1860.
27769	Avery, John, jr.....	New York, N. Y.....	Valve, steam trap.....	April 10, 1860.
29046	Avery, Samuel.....	Pisgah, Mo.....	Planters, corn.....	July 10, 1860.
28141	Avery, Stephen L.....	Norwich, N. Y.....	Windlasses.....	May 8, 1860.
28551	Avery, Thomas, jr., and Henry Kay. (See Kay & Avery.)	Cambridge, Mass.....	Fire escape.....	June 5, 1860.
28338	Ayers, William B.....	Middleport, Ill.....	Grain binding machines.....	May 22, 1860.
27031	Ayers, Daniel W.....	Rahway, N. J.....	Washing machine.....	Feb. 7, 1860.
26824	Ayers, Frazee.....	New Haven, Conn.....	Curtain fixture.....	Jan. 17, 1860.
27679	Babcock, A. C. and D. R. Brown. (See Brown & Babcock.)	Utica, N. Y.....	Faucets, measuring.....	Apr. 3, 1860.
30038	Babcock, George K.....	Canandaigua, N. Y.....	Windmills.....	Sept. 18, 1860.
27509	Babcock, Jabez K.....	New Haven, Conn.....	Fire-arms, breech-loading.....	Mar. 20, 1860.
30452	Babcock, N. L.....	Homer, N. Y.....	Printing press.....	Oct. 23, 1860.
27679	Babcock, Samuel. (See Henshaw, John R., assignor.)	New York, N. Y.....	Bedstead, folding.....	Feb. 28, 1860.
29660	Babcock, William H.....	Rochester, N. Y.....	Propeller for canal boats.....	Aug. 21, 1860.
29753	Bach, Daniel, and Kasimir Krenkel.....	Albion, N. Y.....	Bee-hives.....	Aug. 28, 1860.
29047	Backus, Edward.....	Mystic, Conn.....	Millstones, machines for dressing.....	July 10, 1860.
29350	Bacon, Miner H.....	Mystic, Conn.....	Millstones, machines for dressing.....	July 31, 1860.
30557	Bacon, Miner H.....	Mystic, Conn.....	Stone, machines for dressing.....	Nov. 6, 1860.
28531	Bacon, William A., assignor to self and Marcus V. Reynolds.....	Campelo, Mass.....	Boots and shoes, machine for skiving counters for.....	May 29, 1860.
28434	Badger, Charles, assignor to Melville Badger.....	Edgerton, Wis.....	Mills, grist.....	May 22, 1860.
29754	Badger, Melville. (See next above.)	Ogdensburg, N. Y.....	Seeding machines.....	Aug. 28, 1860.
28049	Badlam, Edward.....	Gadsden, Ala.....	Planters, cotton seed.....	May 1, 1860.
30041	Badgley, N. E.....	Tipton, Iowa.....	Ploughs, mole.....	Sept. 18, 1860.
26807	Baer, Apple & Lindheim. (See Apple, Lindheim & Baer.)	New York, N. Y.....	Measure, beer.....	Jan. 10, 1860.
27197	Bagley, H.....	Boston, Mass.....	Printing presses.....	Feb. 21, 1860.
27510	Baggot, E., assignor to G. B. Gordon.....	Buffalo, N. Y.....	Printing railroad tickets, machine for.....	Mar. 20, 1860.
28339	Bailey, Franklin L.....	Portland, Me.....	Ballot box.....	May 22, 1860.
27680	Bailey, George.....	Cincinnati, Ohio.....	Bed bottom, spring.....	Apr. 3, 1860.
27417	Bailey, G. H. (See Cross, Christopher G., assignor.)	Falls Township, Pa.....	Grain fans.....	Mar. 13, 1860.
30792	Bailey, Gilbert L.....	Greensboro, N. C.....	Railroad crossties, machine for ramming earth around.....	Dec. 4, 1860.
27609	Bailey, John, and John Decamp.....	New London, Conn.....	Wringing machines.....	Mar. 27, 1860.
29556	Bailey, Peter.....	London Grove, Pa.....	Tire, machine for bending.....	Aug. 14, 1860.
30382	Bailey, Robert C.....	Richmond, Ind.....	Dovetailing machines.....	Oct. 16, 1860.
29556	Bailey, S. A.....			
30382	Bailey, William.....			
	Bain, James, and Samuel C. Brown.....			

29543	Baker, Abr'm, ass'r to self and G. A. Brown and John Pirkey.	Shenandoah county, Va.....	Horses' hoofs, paring.....	Aug. 7, 1860.
26825	Baker, Albert.....	Appleton, Wis.....	Raft, life-preserving.....	Jan. 17, 1860.
28955	Baker, Charles H.....	Red Wing, Minn.....	Carriage, steam land.....	July 3, 1860.
28726	Baker, David.....	Harwich, Mass.....	Pitchers, spout and side of.....	June 19, 1860.
29234	Baker, George E.....	Waukegan, Ill.....	Gates.....	July 24, 1860.
28050	Baker, Henry F.....	Centreville, Ind.....	Drain tile, mode of laying.....	May 1, 1860.
30863	Baker, H. H.....	New Market, N. J.....	Ploughs.....	Dec. 11, 1860.
29850	Baker, Henry N.....	Binghampton, N. Y.....	Electro-magnetic apparatus.....	Sep. 4, 1860.
28340	Baker, Henry O., and James McGill.....	New York, N. Y.....	Fire escape.....	May 22, 1860.
29557	Baker, John C.....	Mechanicsburg, Ohio.....	Fruit jars.....	Aug. 14, 1860.
29558	Baker, Levi W.....	Marlboro, Mass.....	Bread slicer.....	Aug. 14, 1860.
30453	Baker, Nathaniel. (See Fellenbaum, David, assignor.)	Brooklyn, N. Y.....	Egg beater.....	Oct. 23, 1860.
26826	Baker, Uriah.....	Elkland, Pa.....	Water wheel.....	Jan. 17, 1860.
27681	Baker, Vincent M.....	Walpole, Ind.....	Refrigerators.....	Apr. 3, 1860.
28142	Baker, W. M.....	Dimock, Pa.....	Seeding machines.....	May 8, 1860.
29031	Baker, William J.....	Boston, Mass.....	Garments, fastening for.....	July 3, 1860.
	Baldwin, Cyrus W., assignor to self, Henry Messer and Luther Aikin.			
	{ Baldwin, James C.....	Waterville, N. Y.....	Preserving hops.....	Sep. 25, 1860.
30113	{ Baldwin, M. D., and.....	Brantford, Can.....	Lamps, vapor, generators for.....	May 8, 1860.
28143	{ Robert Brayton.....	Buffalo, N. Y.....		
	Baldwin, Silas D.....	Millwaukee, Wis.....		
30454	Baldwin, William, and R. Crane. (See Crane & Baldwin.)	Lexington, Ind.....	Millstones, levelling.....	Oct. 23, 1860.
27511	Balmer, Daniel A.....	Canton, Ohio.....	Harvesters.....	Mar. 20, 1860.
29048	Ball, E., and M. L. Ballard, assignors to E. Ball.....	Greensburgh, Ohio.....	Smoothing irons, self-heating.....	July 10, 1860.
30114	Ball, E. O.....	Dayton, Ohio.....	Drills, seed.....	Sep. 25, 1860.
29851	Ball, G. S., and William H. Nauman.....	Elmira, N. Y.....	Preparing wood for umbrella sticks, mode of.....	Sep. 4, 1860.
30516	Ball, Jonathan.....	New York, N. Y.....	Sugar, box for dropping.....	Oct. 23, 1860.
29647	Ballantine, A. T., assignor to self and T. O. Conkling.....	Mount Pleasant, Iowa.....	Ditching machine.....	Aug. 14, 1860.
30175	Ballard, Allen S., assignor to self and R. J. Robeson.....	Mount Pleasant, Iowa.....	Post holes, &c., earth digger for.....	Sep. 25, 1860.
26808	Ballard, M. L., and E. Ball. (See Ball, E., and M. L. Ballard.)	Abington, Mass.....	Boots and shoes, manufacture of.....	Jan. 10, 1860.
27418	Ballou, Francis D., assignor to F. D. Ballou and J. L. Nash.	Cincinnati, Ohio.....	Adding machines.....	Mar. 13, 1860.
	Ballou, John.....			
28712	Banker, G. W., and C. W. Brown. (See Brown & Banker.)	Medford, Mass.....	Barrels, method of securing heads in.....	June 12, 1860.
28051	Banker, George W., assignor to self and Geo. O. Carpenter.	Como Depot, Miss.....	Planters, corn.....	May 1, 1860.
28052	Banks, William C.....	Como Depot, Miss.....	Planters, corn.....	May 1, 1860.
27512	Banks, William C.....	Piermont, N. Y.....	Chairs for railroads, joint.....	Mar. 20, 1860.
27027	Banta, James H.....	Scott, N. Y.....	Water, devices for raising.....	Jan. 31, 1860.
29852	Barber, Henry B.....	New York, N. Y.....	Turning ovals, machine for.....	Sep. 4, 1860.
29853	Barber, Ira S.....	Wolcottville, Conn.....	Planters, seed.....	Sep. 4, 1860.
27957	Barber, W. H.....	Chicago, Ill.....	Show case doors.....	Apr. 24, 1860.
27419	Barclay, Daniel.....	Friendship, Va.....	Ditching machine.....	Mar. 13, 1860.
27610	Barcroft, John W.....	New Haven, Conn.....	Pumps, steam.....	Mar. 27, 1860.
29946	Barden, John S.....	Columbia, N. Y.....	Threshing machines.....	Sep. 11, 1860.
	Barger, David.....			
	Barker, Abel. (See Shepard, E. R., assignor.)			
27420	{ Barker, Isaac T., and.....	Montville, Me.....	Sawing veneers spirally from the log, machine for.....	Mar. 13, 1860.
29559	{ Benjamin F. Barker.....	Belfast, Me.....	Cheese cutter.....	Aug. 14, 1860.
28727	Barker, J. G.....	Watertown, Mass.....	Harvesters.....	June 19, 1860.
30115	Barley, Samuel and J. H.....	Longwood, Mo.....	Seeding machines.....	Sep. 25, 1860.
29755	Barnard, Benjamin.....	Farmington, Ohio.....	Globe, automatic terrestrial time.....	Aug. 28, 1860.
	Barnard, Frederick S.....	New York, N. Y.....		

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
27958	Barnard, William B. (See Adt, John, assignor.)	Lima, N. Y.	Seeding machines, broadcast.	April 24, 1860.
30455	Barned, Absalom. (See Favinger, Samuel, assignor.)	Murfreesboro', N. C.	Vehicles, two horse, attaching horses, &c., to.	Oct. 23, 1860.
30558	Barnes, Geo. C., and A. Lefever. (See Lefever & Barnes.) Barnes, Godfrey, Blish & Smith. (See Godfrey, Barnes, Blish & Smith.)	Forestville, Conn.	Clocks.	Nov. 6, 1860.
29133	Barnes, John.	Washington, Ga.	Plotting instrument.	July 17, 1860.
30192	Barnes, J. W.	Mansfield, Ohio.	Vehicle, velocipede.	Oct. 2, 1860.
27959	Barnes & Matheny. (See Matheny & Barnes.)	New York, N. Y.	Paper bag cutter.	April 24, 1860.
28728	Barnett, G. F. (See Miller, Aaron, assignor.)	Wataga, Ill.	Tire, upsetting.	June 19, 1860.
29661	Barrand, Louis D.	New York, N. Y.	Seythe fasteners.	Aug. 21, 1860.
27513	Barringer, Henry.	Providence, R. I.	Stoves, cooking.	Mar. 20, 1860.
1247	Barritt, Charles L.	Providence, R. I.	Range, cooking.	June 12, 1860.
27184	Barstow, A. C.	Philadelphia, Pa.	Weighing carts.	Feb. 14, 1860.
30456	Barth & Wells. (See Wells & Barth.)	Cincinnati, Ohio.	Printing press feeder.	Oct. 23, 1860.
30864	Barth, Gottlieb Martin, assignor to self and D. D. Jones.	Lancaster, Pa.	Sawing machines, arrangement of devices in.	Dec. 11, 1860.
29237	Bartholomew, D. B.	Enterprise, Pa.	Grain scouring and separating machine.	July 24, 1860.
30039	Bartholomew, Matthew	Spuytien Duyvil, N. Y.	Furnaces, hot air.	Sept. 18, 1860.
30610	Bartlett, Abel H.	Romulus, N. Y.	Excavators.	Nov. 13, 1860.
29339	Bartlett, Andrew J.	Paris, N. Y.	Potato diggers.	July 24, 1860.
30373	Bartlett, George C., assignor to David M. Osborne & Co. Bartlett, J. T. (See Turner, Joshua, assignor.) Barton, Charles C. (See Crane, S. G., assignor.) Barton, Richard C., assignor to E. D. Barton and W. J. Harlan.	Troy, N. Y.	Engines, steam.	Oct. 9, 1860.
28729	Bartoo, Lafayette.	East Aurora, N. Y.	Fastener, sash.	June 19, 1860.
27343	Baschnagel, Francis.	Beverly, Mass.	Compound, plastic.	Mar. 6, 1860.
29947	Bass, Everett.	Pachitta, Ga.	Tire on wheels, tightening.	Sept. 11, 1860.
30793	Bass, Everett.	Pachitta, Ga.	Ploughs.	Dec. 4, 1860.
26644	Bassett, John A.	Salem, Mass.	Gas, manufacture of hydrocarbon.	Jan. 3, 1860.
26963	Bassett, John A.	Salem, Mass.	Decomposing steam, apparatus for.	Jan. 31, 1860.
30104	Batchelder, H. J., and Samuel J. Shaw. (See Shaw & Batchelder.)	Marlboro', Mass.	Lamps.	Sept. 18, 1860.
27770	Batchelder, Hazen J., assignor to self and Wm. F. Eager.	Cambridge, Mass.	Telegraph wires, compound for insulating.	Apr. 10, 1860.
26964	Batchelder, John M.	New York, N. Y.	Electricity, frictional, method of lighting gas by.	Jan. 31, 1860.
27682	Batchelder, W. W.	Rochester, N. Y.	Barrel heads, machines for manufacturing.	April 3, 1860.
30022	Batcheller, L. B.	Rochester, N. Y.	Chair seats.	Sept. 11, 1860.
27879	Batcheller, L. B., assignor to self and R. B. Hurd.	Kingston, Mass.	Stump extractor.	Apr. 17, 1860.
27514	Bates, Caleb.	York, Pa.	Shoemakers' floats.	Mar. 20, 1860.
	Bates, E., Jacob and Michael Weist.			
	Bates, E. J. (See Gatchell, H. P., assignor.)			

1239	Bates, Henry, and Richmond Cranston. (See Craunston & Bates.)	Providence, R. I.	Stove, cooking, plates of a	June 19, 1860.
30040	Bates, Reuben H. N., assignor to J. Morison, jr.	Albany, N. Y.	Furnaces	Sept 18, 1860.
27421	Bates, Thomas H. (See Essex, Henry, assignor)	Warrenton, Ga.	Planters, cotton seed	Mar. 13, 1860.
26827	Battle, Curran	Honeoye Falls, N. Y.	Newspapers, &c., machine for directing	Jan. 17, 1860.
27095	Batty, Jesse	Springfield, Mass.	Egg cup, spring	Feb. 14, 1860.
30795	Bauder, Michael L.	Cleveland, Ohio	Harrows, rotary	Dec. 4, 1860.
30794	Bauhoefer, Lewis	Philadelphia, Pa.	Life-preserving mattress	Dec. 4, 1860.
29232	Baurhyte, Peter. (See Van Steenburgh & Egnor, assignors.)	Freehold, N. J.	Potato digger	May 8, 1860.
26965	Bawden, John, assignor to Gilbert Combs	Boston, Mass.	Filters	Jan. 31, 1860.
28730	Baxter, C. F.	Boston, Mass.	Furnaces	June 19, 1860.
29235	Baxter Charles F.	Brashear, La	Railroad bolts, mode of fastening nuts on	July 24, 1860.
30116	Bayley, G. W. R.	Jersey City, N. J.	Railroad switch	Sept. 25, 1860.
26742	Bayliss, Josiah. (See Brown, Chillion F., assignor.)	Philadelphia, Pa.	Winnowers, grain	Jan. 10, 1860.
27771	Beach, George E.	Montrose, Pa.	Rakes, horse	Apr. 10, 1860.
28823	Beach, Henry H.	Brooklyn, N. Y.	Printing press	June 26, 1860.
29854	Beach, Lorenzo	Freeport, Pa.	Steam hammer	Sept. 4, 1860.
30042	Beach, Moses S.	Philadelphia, Pa.	Paving, rammer for street	Sept. 18, 1860.
29662	Beach, Thomas	New York, N. Y.	Breast pumps, construction of	Aug. 21, 1860.
30865	Beach, William	Lester, Ohio	Seeding machines	Dec. 11, 1860.
27344	Beach, John H.	Dedham, Mass.	Car brakes, railroad	Mar. 6, 1860.
28144	Beal, Dexter and William W.	Boston, Mass.	Sewing machines	May 8, 1860.
29233	Beamer, Samuel, and William Crotzer. (See Crotzer & Beamer.)	Hudson, Mich.	Winnowing machines, grain	July 24, 1860.
29032	Bean, D. S., and Wm. A. Morse. (See Morse & Bean.)	Manchester, N. H.	Boilers, steam	July 3, 1860.
28644	Bean, John, and Benjamin Wright	Boston, Mass.	Pumps	June 12, 1860.
27515	{ Bean, N. S., and J. G. Collins, assignors to Amoskeag Manufacturing Co.	Manchester, N. H.	Harvesters, guard fingers for	Mar. 20, 1860.
29756	Bean, Nehemiah S.	Johnsville, Pa.	Cutting and swaging shoe tips, machinery for	Aug. 28, 1860.
28645	Beans, Robert	North Auburn, Me.	Claw bar	June 12, 1860.
26743	{ Bearce, H. M., and Lewis C. Peck	Lewistown, Me.	Hop frames	Jan. 10, 1860.
27960	Beard, G. H.	Cincinnati, Ohio	Vise bench	Apr. 24, 1860.
28824	Beardsley, Levi A.	South Edmeston, N. Y.	Willows, &c., machine for removing bark from	June 26, 1860.
29948	Beardsley, Levi A.	South Edmeston, N. Y.	Hay elevating forks	Sept. 11, 1860.
30285	Beardsley, Levi A.	South Edmeston, N. Y.	Driers, fruit	Oct. 9, 1860.
30559	Beardner, Henry	Smithburg, Pa.	Pots, coffee	Nov. 6, 1860.
30286	Beaumont, John	Hartford, Conn.	Bedstead fastening	Oct. 9, 1860.
28145	Bechtol, Aaron	Berkley Springs, Va.	Meat chopper	May 8, 1860.
27611	Becker, Christian B.	Lancaster county, Pa.	Carriage wheels, hubs for	Mar. 27, 1860.
28146	Beckwith, James F.	South Alabama, N. Y.	Gate pulley	May 8, 1860.
28053	Bedell, David	Seneca Falls, N. Y.	Wrench, pipe	May 1, 1860.
26828	Bebee, Henry. (See Warren, Henry, assignor.)	Chicago, Ill.	Cotton stalks, machines for pulling and cutting	Jan. 17, 1860.
28731	Beecher, William F.	Naugatuck, Conn.	Railroads, street, iron rails for	June 19, 1860.
	Becky, N. J., and Thomas Harvey. (See Harvey & Becky)	Brooklyn, N. Y.		
	Beers, Smith			
	Beers, Sydney A.			

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
30193	Beggs, Eugene. (See McCormick & Ferrol, assignors.)	New York, N. Y.	Alarm for doors	Oct. 2, 1860.
29453	Behn, Henry.	New York, N. Y.	Carriage brakes	Aug. 7, 1860.
29049	Beidler, J. H. (See Lindsey, Thomas, assignor.)	Albany, N. Y.	Carriage tops, removable, attaching.	July 10, 1860.
30796	Beicher, John S.	Farmington, Ohio.	Cultivators	Dec. 4, 1860.
26809	Beiden, Hiram M.	Philadelphia, Pa.	Latch for sliding doors	Jan. 10, 1860.
27945	Belfield, Henry, assignor to self and Justice Cox.	Philadelphia, Pa.	Pumps	April 17, 1860.
27517	Belford, J., and J. Boyd. (See Boyd & Belford.)	Greenupburg, Ky.	Carriage axles, arms of.	Mar. 20, 1860.
29050	Bell, A. J.	Washington, D. C.	Hat ventilators	July 10, 1860.
30866	Bell, Francis H.	Clinton, Ill.	Seeding machines	Dec. 11, 1860.
29051	Bell, Henry	Harlem, N. Y.	Dovetailing machine, mode of operating the cutters in.	July 10, 1860.
27961	Bell, John	Rushford, N. Y.	Tanning, method of.	April 24, 1860.
27328	Bell, Martin A.	New York, N. Y.	Vessels, construction of.	Feb. 28, 1860.
27880	Bell, Thomas, assignor to self and C. Godfrey Gunther.	Washington, D. C.	Bells, hanging	April 17, 1860.
27518	Bell, William H.	Washington, D. C.	Fire-arms, revolving	Mar. 20, 1860.
26872	Bellah, J. D. (See Johnson, William H., assignor.)	Seneca Falls, N. Y.	Rope-making machines	Jan. 17, 1860.
26881	Bellows, R., assignor to self and D. B. Lum, assignor to Abraham Orvis.	New York, N. Y.	Bureau	Jan. 24, 1860.
29560	Belter, John H.	Brooklyn, N. Y.	Compounds used as decolorizers	Aug. 14, 1860.
27198	Belton, Patrick M.	Huntsville, Ala.	Presses	Feb. 21, 1860.
28627	Betts, Edward C.	Philadelphia, Pa.	Key-seats, &c., machine, for cutting	June 5, 1860.
28247	Bement, William B., assignor to self and James Dougherty.	West Springfield, Pa.	Ditching machine	May 15, 1860.
30867	Benedict, H. L., and N. S. Warner. (See Warner & Benedict.)	Conneaut, Ohio.	Swifts	Dec. 11, 1860.
30043	{ Benedict, Isaac A., and G. W. Cummings.	Aurelius, N. Y.	Jack, lifting	Sept. 18, 1860.
27962	Benedict, Newton	Avoca, N. Y.	Cultivators, corn and cotton	April 24, 1860.
29134	Benjamin, George	Mount Olive, N. C.	Planters, seed	July 17, 1860.
29351	Bennett, G. T.	Mount Olive, N. C.	Potatoes, machines for covering	July 31, 1860.
30287	Bennett, Harmon L.	Long Branch, N. J.	Railroads, propelling cars on	Oct. 9, 1860.
28341	Bennett, James Arlington	King's county, N. Y.	Coal oils, apparatus for condensing	May 22, 1860.
29232	Bennett, John F.	Pittsburg, Pa.	Wagon brake	July 24, 1860.
30460	Bennett, J. H. H.	Hunt's Hollow, N. Y.	Gates	Oct. 23, 1860.
28552	Bennett, J. H. H.	Hunt's Hollow, N. Y.	Valve, steam	June 5, 1860.
28956	Bennett, Leopold.	Pittsburg, Pa.	Varnish, mode of polishing	July 3, 1860.
30711	Bennett, William R., and Charles Storer.	Boston, Mass.	Cultivators	Nov. 27, 1860.
27329	Benson, John, et al. (See Leland, E. A., assignor.)	Penn Yan, N. Y.	Bedstead, wardrobe	Feb. 28, 1860.
29352	Benton, Luther B.	New York, N. Y.	Grain separators	July 31, 1860.
1318	Berg, William, assignor to Nestor Houghton.	Farmer, N. Y.	Centre pieces	Oct. 2, 1860.
	Bergen, Cernellus.	New York, N. Y.		
	Berger, Henry.	New York, N. Y.		

292336	Bernot, Etienne	Paris, France	File-cutting machine	July 24, 1860.
302888	Berrill, John A.	Waterville, N. Y.	Mill, paint	Oct. 9, 1860.
27096	Berry, Joseph	New York, N. Y.	Nail machine, cut	Feb. 14, 1860.
30653	Berthoud, Achille	New York, N. Y.	Electroplating with alloys of gold	Nov. 20, 1860.
30951	Bertrand, Charles E.	New York, N. Y.	Sugar, crystallizing, tanks for	Dec. 18, 1860.
27516	Bestwick, John, Jr., and Abner Alden	Dedham, Mass.	Car-couplings	Mar. 20, 1860.
30712	Beukelmann, Andrew	Langford, N. Y.	Ploughs	Nov. 27, 1860.
26829	Beverly Rubber Company. (See Parmalee, D. D., ass't.)	Philadelphia, Pa.	Crutches	Jan. 17, 1860.
27032	Bickel, August	Westerly, R. I.	Window sash supporter	Feb. 7, 1860.
28054	Bickel, William, et al. (See Lykens, Isaac P., assignor.)	Westerly, R. I.	Stand, embroidery sewing	May 1, 1860.
28248	Bickford, Dana	Westerly, R. I.	Air engines, compressed	May 15, 1860.
30289	Bickford, Dana	Philadelphia, Pa.	Railroad cars, over obstructions, conveying city	Oct. 9, 1860.
28325	Biderman, Peter I.	New Orleans, La.	Bales, cotton, iron tie for	June 26, 1860.
28732	Bier, Charles C.	Hamilton, Upper Canada	Ploughs, steam	June 19, 1860.
27772	Bigelow, Albert	New Haven, Conn.	Alarm, burglar	April 10, 1860.
27783	Bigelow, George W.	Willimantic, Conn.	Scales	April 3, 1860.
27683	Bill, H. N. and J. C.	Norfolk, Va.	Drills, ratchet	July 31, 1860.
29353	Billiard, Lewis R.	Cleveland, Ohio	Water from wells, apparatus for elevating	May 22, 1860.
28342	Billings, G. W., and W. M. Hutton	Beardstown, Ill.	Cement	May 1, 1860.
28055	Billings, Horace	Rutland, Vt.	Register, speed	Mar. 27, 1860.
27664	Billings, H. A., and J. P. Manton. (See Manton & Billings.)	New York, N. Y.	Lamps, vapor	Oct. 2, 1860.
30194	Billings, Joseph D., assignor to self and E. A. Chapin	Southington, Conn.	Sausage machine	Mar. 13, 1860.
27422	Billings, William B.	Philadelphia, Pa.	Cables, surge reliever for anchor	July 24, 1860.
29338	Bills, Joshua	Birmingham, Pa.	Glass vessels, fastening for metallic covers to	Aug. 21, 1860.
29743	Bingham, James, assignor to F. D. Bingham	Newark, N. J.	Carriage seat, sliding	April 17, 1860.
27881	Bird, John, assignor to Bakewell, Pears & Co.	Jersey City, N. J.	Engines, steam	July 3, 1860.
27857	Bird, William A.	Hannibal, Mo.	Bridge, truss	April 24, 1860.
28957	Birkbeck, W.	Warren, Mass.	"Cribbing," device to prevent horses from	July 31, 1860.
27963	Bishop, Goodwin O.	Detroit, Mich.	Crimping machines	Aug. 28, 1860.
29354	Bishop, William H., and Augustus H. Low	North Bergen, N. Y.	Churn	July 10, 1860.
29757	Bissell, David	North Bergen, N. Y.	Stove pipes	Dec. 18, 1860.
29052	Bissell, Levi	New York, N. Y.	Bracelet fastening	Feb. 28, 1860.
30952	Bissell, Levi	Rogersville, Ohio	Lard expresser	Jan. 24, 1860.
27264	Bissinger, Joseph	Philadelphia, Pa.	Hulling and cleaning rice, machines for	Nov. 13, 1860.
26879	Bixler, C.	Bloomfield, Ky.	Beehives	May 15, 1860.
	Black, Hugh W., and J. R. Byler. (See Byler, Jacob R., assignor.)	Erie, Pa.	Railroad frogs, substitute for	Sept. 25, 1860.
	Black, Hugh W., et al. (See Byler, Jacob R., assignor.)	Princeton, Ill.	Cultivators	Aug. 28, 1860.
30653	Black, Horatio N., assignor to self, H. Korn, Jr., and E. S. Bodine	New Haven, Conn.	Breaking stones, machine for	April 17, 1860.
28249	Black, James S.	Pepperell, Mass.	Belt fastening	April 24, 1860.
30117	Black, Peter, et al. (See Long, John M., assignor.)	East Pepperell, Mass.	Auger	April 17, 1860.
29758	Black, Samuel A., and Frederick C. Ford	Abington, Mass.	Boots and shoes, manufacture of	Aug. 14, 1860.
27882	Black, Thomas	Abington, Mass.	Boots and shoes	Aug. 14, 1860.
28033	Blake, Eli W.	New Haven, Conn.	Cork screws	Mar. 27, 1860.
27946	Blake, G. W., assignor to self and L. W. Blake			
29561	Blake, James, assignor to self and Henry Blake			
29562	Blake, Lyman R.			
	Blake, Lyman R.			
	Blake, L. W., et al. (See Blake, G. W., assignor.)			
	Blake, Philos, assignor to self and Eli W. Blake			
27665	Blake, Robert, and Lysander Button. (See Button & Blake.)			

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
29663	Blake, William.....	Boston, Mass.....	Pipes, galvanized iron, cleansing.....	Aug. 21, 1860.
29664	Blake, William.....	Boston, Mass.....	Nails, galvanized, cleansing and separating.....	Aug. 21, 1860.
29744	Blaklee, James D., and S. S. Middlebrook.....	Newtown, Conn.....	Hat bodies, machinery for felting.....	Jan. 10, 1860.
29456	Blanchard, George.....	New York, N. Y.....	Lamps.....	Aug. 7, 1860.
27265	Bligh, G. M.....	New York, N. Y.....	Paint cans.....	Feb. 28, 1860.
	Blish, Godfrey, Barnes & Smith. (See Godfrey, Barnes, Blish & Smith.)			
29457	Blocher, John.....	Williamsville, N. Y.....	Water wheels.....	Aug. 7, 1860.
30797	Blocher, John.....	Williamsville, N. Y.....	Chain.....	Dec. 4, 1860.
	Blodgett, N. F., and S. P. Tolman. (See Tolman & Blodgett.)			
30195	Blondin, I. F., assignor to self, F. Douglas, N. H. Spofford, and J. B. Hershoff.	Niagara Falls, N. Y.....	Skates.....	Oct. 2, 1860.
28358	Blood, Joel S., and James W. Miller.....	Newport, N. H.....	Posts, fence, sockets for.....	July 3, 1860.
27345	{ Bloodgood, John H., and Moses A. Johnson.....	New York, N. Y.....	Felting machinery.....	Mar. 6, 1860.
30953	Blue, John.....	Lowell, Mass.....	Harvesters.....	Dec. 18, 1860.
26810	Blume, Theodore, assignor to self and M. W. Hamer & Co.	Covert, N. Y.....	Pulleys, machinery for facing.....	Jan. 10, 1860.
		Cincinnati, Ohio.....		
26745	Blythe, James. (See Dreysel, L. R., assignor.)	Jackson C. H., Va.....	Mortising tool.....	Jan. 10, 1860.
29759	Board, Thomas, and C. N. Austin.....	Ripley, Va.....	Shoe cleaner.....	Aug. 28, 1860.
28147	Boardman, C. T.....	Bergen Point, N. J.....	Metal pipe, making sheet.....	May 8, 1860.
27097	Boardman, Harris.....	Lancaster, Pa.....	Carriage hubs, metallic.....	Feb. 14, 1860.
30868	Boardman, H. C.....	Morrisville, Vt.....	Clothes dryer.....	Dec. 11, 1860.
29355	Boardman, J. H.....	New York, N. Y.....	Boilers, steam.....	July 31, 1860.
29760	Boeklen, Reinhold.....	Brooklyn, N. Y.....	Hammers.....	Aug. 28, 1860.
29563	Bodine, E. S., et al. (See Black, Horatio N., assignor.)	Bridgeton, N. J.....	Bottles.....	Aug. 14, 1860.
30196	Bodine, J. N.....	St. Louis, Mo.....	Drying grain, machines for.....	Oct. 2, 1860.
1197	Bodrio, E. J.....	West Newton, Mass.....	Oil cloth, floor, (design).....	Jan. 31, 1860.
1198	Bogle, James, assignor to self and Daniel Bogle	West Newton, Mass.....	Oil cloth, floor, (design).....	Jan. 31, 1860.
29855	Bogle, James, assignor to self and Daniel Bogle	Trenton, Iowa.....	Horse-power.....	Sept. 4, 1860.
27883	Boghannan, Benjamin.....	Baltimore, Md.....	Padlock.....	April 17, 1860.
27423	Bomberger, C. C.....	West Carlisle, Ohio.....	Wind wheel.....	Mar. 13, 1860.
28826	Bond, Caleb.....	Richmond, Ind.....	Water wheels.....	June 26, 1860.
27199	Bond, Henry F.....	Waltham, Mass.....	Bread slicer.....	Feb. 21, 1860.
27266	Bond, Henry F.....	Waltham, Mass.....	Reading card.....	Feb. 28, 1860.
29564	Bond, John P.....	Greenwood, S. C.....	Ploughs.....	Aug. 14, 1860.
27684	Bond, Richard F.....	Cambridge, Mass.....	Clock weights, construction of.....	April 3, 1860.
30457	Bond, S. L.....	Greenwood, S. C.....	Harness.....	Oct. 23, 1860.
28343	Bonham, J. H.....	Elizabethtown, Ohio.....	Planters, corn.....	May 22, 1860.
29239	Bonnet, Louis.....	New York, N. Y.....	Meat cutter.....	July 24, 1860.
28827	Bonney, N. W.....	Victoria, Texas.....	Bolt for doors.....	June 26, 1860.
	Boone, William C., et al. (See Pittman, George W., ass'r)			

30954	Boos, Gabriel.....	New York, N. Y.....	Enamelling mouldings, machines for.....	Dec. 18, 1860.
	Booth, Boynton & Durham. (See Boynton, Leander W., assignor.)			
28959	Booth, Ezekiel.....	Troy, N. Y.....	Sewing machines.....	July 3, 1860.
	Booth, Ezra B. (See Washburn, Theodore S.)			
30955	Booth, Holmes & Hayden. (See Neilson, George, ass'r.)	Janesville, Wis.....	Musical instruments, automatic attachment to keyed.....	Dec. 18, 1860.
	Bootman, E. D.....			
	Bope, Jacob W. (See Ribble, John H., assignor.)			
	Bordentown Machine Company. (See Taylor, Robert R., assignor.)			
	Bordentown Machine Company. (See Molyneux, James, assignor.)			
	Bostwick, Oscar, and C. L. Nelson. (See Nelson & Bostwick.)			
30458	Bosworth, George S.....	Troy, N. Y.....	Car wheels.....	Oct. 23, 1860.
30525	Bosworth, George S.....	Troy, N. Y.....	Cast-iron wheels, moulding.....	Oct. 30, 1860.
28960	Botsford, W. B., and T. J. Penny. (See Penny & Botsford.)	Janesville, Wis.....	Fats, machine for cutting.....	July 3, 1860.
28057	Boulger, William E.....	New York, N. Y.....	Locks for travelling bags.....	May 1, 1860.
28056	Bourne, S., jr., and J. G. Cunningham.....	New York, N. Y.....	Lock, trunk.....	May 1, 1860.
29458	Bourne, S., jr.....	New York, N. Y.....	Trunks.....	Aug. 7, 1860.
30290	Bourne, William Oland.....	New York, N. Y.....	Ore separators.....	Oct. 9, 1860.
28148	Bovey, George C.....	Chillicothe, Ohio.....	Bridge for canals, automatic draw.....	May 8, 1860.
30784	Bovey, George C., assignor to self and D. C. Ruggles.....	Chillicothe, Ohio.....	Gates, farm.....	Nov. 27, 1860.
30713	Bowen, L. K., et al. (See Carvalho, S. N., assignor.)	Millersburg, Ohio.....	Planters, corn.....	Nov. 27, 1860.
27424	Bower, Benjamin.....	Cincinnati, Ohio.....	Chairs, railroad.....	Mar. 13, 1860.
	Bowers, J. W.....			
	Bowker, D., and G. Butterfield. (See Butterfield & Bowker.)			
27884	Bowker, S. D.....	Geneva, Ohio.....	Whiffletree, self detaching.....	April 17, 1860.
28059	Bowley, Newlove & Lynch. (See Newlove, Thomas, ass'r.)	Middletown, Md.....	Printing addresses on newspapers, &c., machine for.....	May 1, 1860.
27685	Bowman & Brown. (See Pitlock, George W., assignor.)	Waltham, Mass.....	Scissors.....	April 3, 1860.
28553	Bowman, Francis B.....	Somerset, Ohio.....	Millstones, machines for dressing.....	June 5, 1860.
29119	Bowman, Joel.....	Brockfort, N. Y.....	Harvesting machines.....	July 10, 1860.
30956	Bowman, John M., assignor to Huntley, Bowman & Co.....			
27885	Bowman, John M., et al. (See Landon, Frederick, ass'r.)	Morristown, Pa.....	Valves of steam engines, operating the.....	Dec. 18, 1860.
	Bowman, Lewis H.....	Erata, Miss.....	Currying and leather dressing machine.....	April 17, 1860.
	Boyce, Robert P.....			
27033	Boyce, T. W., et al. (See Flanders, W. A., assignor.)	Mansfield, Ohio.....	Deficating cane juices.....	Feb. 7, 1860.
27612	Boyd, D. F.....	New York, N. Y.....	Traps for water closets.....	Mar. 27, 1860.
30383	Boyd, Harkness.....	Philadelphia, Pa.....	Spring door.....	Oct. 16, 1860.
30118	Boyd, James, and James Belford.....	Baltimore, Md.....	Saddles.....	Sept. 25, 1860.
1216	Boyd, J. H.....	New York, N. Y.....	Andirons (design).....	April 3, 1860.
1217	Boyd, Samuel.....	New York, N. Y.....	Andirons (design).....	April 3, 1860.
	Boyd, Samuel.....			
	Boyden, John, et al. (See Gibson, A. J., assignor.)	Newark, N. J.....	Hat bodies, machinery for forming.....	Jan. 10, 1860.
26811	Boyden, Seth, assignor to self and H. H. Jaques.....			
	Boyers, William, and John P. Ledy. (See Ledy & Boyers.)			
	Boyle, David. (See Littlefield, Calvin A., assignor.)			
26645	Boyle, James E.....	Brooklyn, N. Y.....	Valves for water closets.....	Jan. 3, 1860.
28058	Boyle, James E.....	Brooklyn, N. Y.....	Heating apparatus, water vacuum valves for.....	May 1, 1860.
28961	Boynton, Charles A.....	Hyde Park, Vt.....	Clothes frame.....	July 3, 1860.

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
29135	Boynton, Charles A.	Hyde Park, Vt.	Butter worker	July 17, 1860.
30714	Boynton, John	East Hartford, Conn.	Fire-arms, breech-loading	Nov. 27, 1860.
27755	Boynton, Leander W., assignor to self, Durham & Booth	New York, N. Y.	Vehicles, attaching thills to	April 3, 1860.
26646	Boynton, Paul	Canton, N. Y.	Fire-arm magazine	Jan. 3, 1860.
27773	Brace, Julius, and D. S. Stombs. (See Stombs & Brace.)	Fall River, Mass.	Knife and fork cleaner	April 10, 1860.
	Brackett, Lewall			
	Bradberry, J. D., and J. J. Hutchison. (See Hutchison & Bradberry.)			
27330	Bradbury, Charles J., assignor to Paul P. Todd	Boston, Mass.	Bell-pull	Feb. 28, 1860.
30197	Bradford, Charles K.	Lynn, Mass.	Boots, gaiter	Oct. 2, 1860.
	Bradford, L. H., and J. A. Cutting. (See Cutting & Bradford.)			
	Bradford, Martin L., & Co. (See Walcott, Halsey D., ass'r.)			
26812	Bradford, P., and J. B. Sargent. (See Sargent & Bradford)			
29761	Bradley, George, assignor to Jacob S. Rogers	Paterson, N. J.	Spinning frame cap	Jan. 10, 1860.
29231	Bradley, L.	New York, N. Y.	Telegraphic apparatus	Aug. 28, 1860.
30044	Bradshaw, John A., and A. Frank Colby	Lowell, Mass.	Punching machines	July 24, 1860.
	Brady, Alfred	New York, N. Y.	Pipe casting	Sept. 18, 1860.
	Brady, John, et al. (See Wright, William, assignor.)			
30908	Brady, Lewis P.	Mount Joy, Pa.	Harvesting machines, rakes for	Dec. 18, 1860.
29856	Brady, Reuben	New York, N. Y.	Tuck and plait holder	Sept. 4, 1860.
30198	Brainerd, Jehu	Cleveland, Ohio	Harrows, rotary	Oct. 2, 1860.
28554	Brakely, Joseph	New York, N. Y.	Bark, machine for separating the qualities of	June 5, 1860.
28555	Brandt, Henry	Columbia, Pa.	Bending teeth for horse rakes	June 5, 1860.
28034	Branwhite, Charles, assignor to Charles Knox	Williamsburg, N. Y.	Cigars, hat-rack for	April 24, 1860.
29356	Brasher, Nathan	Green's Fork, Ind.	Beehives	July 31, 1860.
27200	Brauner, Max	Brooklyn, N. Y.	Inkstands	Feb. 21, 1860.
29240	Brauner, Hunt & Co. (See Hunt, Thomas E., assignor.)	New York, N. Y.	Fastener, sash	July 24, 1860.
	Braynard, Thomas L.			
	Braynard, Thomas L., et al. (See Walsh, John J., ass'r.)			
	Brayton, R. and J. C., and M. D. Baldwin. (See Baldwin & Brayton.)			
30291	Breitenstein, William	New York, N. Y.	Fire escape	Oct. 9, 1860.
29565	Brett, Samuel G.	Newport, N. H.	Shoe pegs, machine for pointing	Aug. 14, 1860.
28828	Brettell, E. W.	Newark, N. J.	Lock	June 26, 1860.
29857	Brewer, Charles D.	Lewisburg, Pa.	Millstones, machine for dressing	Sept. 4, 1860.
28646	Brewer, Nelson W.	Williamsport, Pa.	Fire-arms, self-loading	June 12, 1860.
	Brewster, Lawrence & Britton. (See Lawrence, James W., assignor.)			
29949	Bricker, Leonard	Springfield, Ill.	Lamp, combination of smoothing iron and	Sept. 11, 1860.
27098	Brickett, Edmund	Minot, Me.	Harness breechings and breast plates, braces for	Feb. 14, 1860.
	Bridge, Beach & Co. (See De Zouche, Isaac, assignor.)			
28149	Bridge, J. L., and W. B. Lodge	Vernon, N. Y.	Felt caps, former for forming seamless	May 8, 1860.
28805	Bridges, Lyman, assignor to self and N. M. Simonds	Chicago, Ill.	Heating apparatus	June 19, 1860.
	Bridges, L. (See Brown & Bridges.)			

30199	Bridges, W. C., and D. P. Dietrick.....	Philadelphia, Pa.....	Hose protector.....	Oct. 2, 1860.
30715	Bridling, Ernest W., and Francis G. Maxwell.....	Baltimore, Md.....	Collars, horse.....	Nov. 27, 1860.
29136	Briggs, A. D. (See Merrick, Solomon, deceased.)			
29060	Briggs, Ephraim.....	Medina, Ohio.....	Cultivators.....	July 17, 1860.
27947	Briggs, John C.....	Woodbury, Conn.....	Musical reeds.....	May 1, 1860.
29033	Briggs, Joseph W., assignor to self and Jacob W. Joraleman.	Cleveland, Ohio.....	Window sash supporter.....	April 17, 1860.
30869	Briggs, Stephen A., assignor to self and C. G. Crowell.....	Philadelphia, Pa.....	Mills, corn and cob.....	July 3, 1860.
29053	Briggs, Theodore.....	Philadelphia, Pa.....	Harpoons, explosive.....	Dec. 11, 1860.
29858	Brinckerhoff, Cornelius R.....	Batavia, N. Y.....	Harvesters.....	July 10, 1860.
30119	Brind, H. (See Stevens, John, assignor.)			
30611	Brinly, T. E. C.....	Louisville, Ky.....	Ploughs.....	Sept. 4, 1860.
28962	Brinly, T. E. C.....	Louisville, Ky.....	Cultivators.....	Sept. 25, 1860.
30560	Bristol, Richard C.....	Chicago, Ill.....	Valves, slide.....	Nov. 13, 1860.
	Bristow, James F. and Isaac W.....	Vevay, Ind.....	Staves, machine for jointing.....	July 3, 1860.
	Brittan, N.....	Lockport, N. Y.....	Lightning rods.....	Nov. 6, 1860.
	Britton, Brewster & Lawrence, (See Lawrence, Jas. W., assignor.)			
28150	Broad, Samuel B.....	New York, N. Y.....	Life saving raft.....	May 8, 1860.
28136	Brock, John A.....	Chicago, Ill.....	Amalgamator.....	May 1, 1860.
27425	Brockett, C. P., E. Todd, and John Brockett.....	New Haven, Conn.....	Composition for cleaning and silvering metals.....	Mar. 13, 1860.
29454	Brodhead, Charles, et al. (See Weiss, Jedediah, ass'r.)			
	Brognaud, L. N., et al. (See Shaw, Thomas, ass'r.)			
	Brognard, L. Ney. (See Shaw, Thomas, ass'r.)			
29357	Brooke, John M.....	United States Navy.....	Metre, deep sea sounding.....	Aug. 7, 1860.
29230	Brooklyn Flint Glass Co. (See Warner, Charles H., ass'r.)			
30200	Brooks, James.....	Romulus, N. Y.....	Ploughs, ditching.....	July 31, 1860.
27099	Brooks, John S., and Leavitt B. Grover.....	Rochester, N. Y.....	Gridiron.....	July 24, 1860.
28829	Brooks, Rhodom M.....	Greenville, Ga.....	Press, cotton.....	Oct. 2, 1860.
27965	Brooks, Robert H.....	Greenville, Ga.....	Ploughs.....	Feb. 14, 1860.
27964	Brooks, R. M.....	Greenville, Ga.....	Cultivators.....	June 26, 1860.
28733	Brooks, Sylvanus F.....	Weston, Mass.....	Looking glass, or mirror.....	Apr. 24, 1860.
28352	Brooks, Sylvanus F.....	Weston, Mass.....	Cradle, infant's.....	Apr. 24, 1860.
	Brooks, Sylvanus F.....	Weston, Mass.....	Box, game.....	June 19, 1860.
	Broughton, Albert, assignor to self, Alexander Lindsey, and John R. Platt.	Malone, N. Y.....	Glass, machines for grinding and polishing.....	May 29, 1860.
28806	Broughton, Albert, assignor to self and Alexander Lindsey.	Malone, N. Y.....	Stump extractor.....	June 19, 1860.
28344	Broughton, John.....	New York, N. Y.....	Millstones, dress for.....	May 22, 1860.
	Brower, George C., and Alfred Damarin. (See Damarin & Brower.)			
28556	Brower, George C.....	New Orleans, La.....	Gas torches.....	June 5, 1860.
27100	Brower, Robert F.....	New York, N. Y.....	Engine, rotary, steam.....	Feb. 14, 1860.
29054	Brown, Abram C.....	Philadelphia, Pa.....	Condensers.....	July 10, 1860.
27426	Brown, Adolph and Felix.....	New York, N. Y.....	Pumps, steam.....	Mar. 13, 1860.
27613	Brown, Adolph and Felix.....	New York, N. Y.....	Crushing apparatus, sugar.....	Mar. 27, 1860.
	Brown, Baker & Pirkey. (See Baker, A., ass'r.)			
	Brown & Bowman. (See Pittock, George W.)			
	Brown, C. D., and W. J. Bunce. (See Widdows, Frederick, assignor.)			
29055	Brown, Charles F.....	Warren, R. I.....	Carriages, &c., gun, wheels for.....	July 10, 1860.
30045	Brown, Charles F.....	Warren, R. I.....	Fire-arms.....	Sep. 18, 1860.
29455	Brown, Charles H.....	Fitchburg, Mass.....	Boilers, steam, low water alarm apparatus for.....	Aug. 7, 1860.
	Brown, Charles L., and William H. Morris. (See Morris & Brown.)			

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
28324	Brown, Charles W., and George W. Banker, assignors to G. W. Banker & G. O. Carpenter.	Boston, Mass.	Mixing paint, machine for.	May 15, 1860.
28345	Brown, Charles W.	Boston, Mass.	Shears, rotary cutting.	May 22, 1860.
28830	Brown, Chillion F.	Bridgeport, Conn.	Window sash, spring roller for.	Jan. 17, 1860.
29120	Brown, Chillion F., assignor to self, and Josiah Baxlies	Bridgeport, Conn.	Lock.	July 10, 1860.
26880	Brown, D. C.	New York, N. Y.	Churn.	Jan. 24, 1860.
27519	Brown, Dixon.	Norfolk, Va.	Pin fastening.	Mar. 20, 1860.
30459	Brown, D. R., and A. C. Babcock	New Haven, Conn.	Tug shaft.	Oct. 23, 1860.
27686	Brown, Edward.	Waterbury, Conn.	Curtain fixture.	Apr. 3, 1860.
30716	Brown, Edwin Lee.	Brooklyn, N. Y.	Heating apparatus, regulator for.	Nov. 27, 1860.
1352	Brown, E. H. & E., et al. (See Young, C. M., assignor.)	New York, N. Y.	Shutter, iron.	Dec. 18, 1860.
28449	Brown, E. H.	New York, N. Y.	Freezers, ice cream.	May 29, 1860.
29762	Brown, George W.	Galesburg, Ill.	Cultivators.	Aug. 28, 1860.
27201	Brown, George W.	Huntington, N. Y.	(Design).	
30203	Brown, H., and G. Smith. (See Smith & Brown.)			
27201	Brown, Hugh B.	Huntington, N. Y.	Orthography, &c., apparatus for teaching.	Feb. 21, 1860.
30203	Brown, James, and Lyman Bridges.	Chicago, Ill.	Furnace and cooking range.	Oct. 2, 1860.
27687	Brown, John, and Charles R. Ellis	New York and Brooklyn, N. Y.	Warming apparatus, means of regulating the draft to the fire in.	Apr. 3, 1860.
29241	Brown, John, and G. H. Jones. (See Jones & Brown.)	New York, N. Y.	Boilers, steam.	July 24, 1860.
23450	Brown, John.	Cincinnati, Ohio.	Lanterns.	May 29, 1860.
30717	Brown, J. B., and C. P. Crossman. (See Crossman & Brown.)			
27966	Brown, John D.			
30664	Brown, J. I., and John Lyker. (See Lyker, John, ass'r.)			
26746	Brown, J. Silas.	Green Point, N. Y.	Baby jumper, couch, and carriage.	Nov. 27, 1860.
28436	Brown, Lyman, and James and John Leland.	Worcester, Mass.	Car axles.	Apr. 24, 1860.
29541	Brown, L. D.	St. Louis, Mo.	Harvesters.	Nov. 20, 1860.
29763	Brown, R. B.	Cambridge, Vt.	Sewing machines.	Jan. 10, 1860.
26882	Brown, Samuel C., and James Bain. (See Bain & Brown.)			
27101	Brown, Stephen W., assignor to self and Joel McComber.	Syracuse, N. Y.	Printers' composing stick.	May 22, 1860.
29137	Brown, Thomas, jr., assignor to self and Win. H. Brown.	South Danvers, Mass.	Glue, machine for cutting.	Aug. 7, 1860.
27688	Brown, Thomas S.	Philadelphia, Pa.	Ships' berths, oscillating.	Aug. 28, 1860.
28250	Brown, Thomas W.	Boston, Mass.	Skates.	Jan. 24, 1860.
30526	Brown, Thomas W.	Boston, Mass.	Twine holder.	Feb. 14, 1860.
30292	Brown, William, et al. (See Zollickoffer, Wm. T., ass'r.)			
29137	Brown, William A.	Philadelphia, Pa.	Cars, railroad, couches for.	July 17, 1860.
27688	Brown, William G., and Frederick McKee.	Birmingham, Pa.	Iron, manufacture of.	April 3, 1860.
28250	Brown, William G. (See Harlow, E. S. assignor.)			
30526	Brown, William H. (See Brown, Thomas, jr., ass'r.)			
30292	Brown, William N.	Camden, N. J.	Burners, vapor.	May 15, 1860.
30292	Browne, Zerah B.	Simsbury, Conn.	Seeding hoes.	Oct. 30, 1860.
30292	Browne, Whiton, et al. (See Woodward, Thos. T., ass'r.)			
30292	Bruback, Frederick.			
30292	Bruce, Edwin, et al. (See Lewis, Nathan C., jr., ass'r.)			
30292	Bruce, Nathan. (See Low, John, ass'r.)	Lancaster, Pa.	Coffins, wooden.	Oct. 9, 1860.

28061	Bruce, R., and C. L. Pyron. (See Pyron & Bruce.)	Marshall, Mo.	Harvester.	May 1, 1860.
29366	Bruce, S. T.	Beloit, Wis.	Mop holder.	Aug. 14, 1860.
29665	Bruel, B. W.	Hoboken, N. J.	Oxychloride of lead, mode of making.	Aug. 21, 1860.
29863	Brumleu, Ludwig.	Queenstown, Md.	Dredging apparatus.	July 3, 1860.
30293	Bryan, Thomas Alfred.	Philadelphia, Pa.	Casting embossed type.	Oct. 9, 1860.
26747	Bryant, Isaac C.	Brooklyn, N. Y.	Journal boxes.	Jan. 10, 1860.
27102	Bryant, Joel.	Brooklyn, N. Y.	Mills, grinding.	Feb. 14, 1860.
30202	Bryant, Samuel R.	Waterford, Pa.	Beehives.	Oct. 2, 1860.
29666	Bryce, Robert D.	East Birmingham, Pa.	Glass vessels, attachment of covers to.	Aug. 21, 1860.
27267	Bryner, John.	Peoria, Ill.	Calendar, counting-house.	Feb. 28, 1860.
28557	Bryson, Robert.	Schenectady, N. Y.	Harvesters.	June 5, 1860.
28251	Buchanan, Andrew.	Jersey City, N. J.	Valves for steam engines, slide arrangement for balancing.	May 15, 1860.
28062	Buchanan, Coe S.	Ballston Spa, N. Y.	Paper stuff, boilers for preparing.	May 1, 1860.
29764	Buchanan, George.	Hickory, Pa.	Wagon brakes, self-acting.	Aug. 28, 1860.
30798	Buchanan, George.	Hickory, Pa.	Pendulum, compensating.	Dec. 4, 1860.
29459	Buckingham, C. P.	Mount Vernon, Ohio.	Engines, steam governors for.	Aug. 7, 1860.
30046	Buckins, H., assignor to self and Samuel Petree.	Canton, Ohio.	Milk straining palls.	Sept. 18, 1860.
30665	Buckley, George F.	West Barnstable, Mass.	Settee or chair.	Nov. 20, 1860.
28063	Buell, M. V. B.	Buffalo, N. Y.	Lamps, vapor.	May 1, 1860.
29460	Buell, John M.	Zanesville, Ohio.	Churn.	Aug. 7, 1860.
30047	Buffam, Jonathan. (See Rowell, John B., assignor.)	New Philadelphia, Ohio.	Separators, grain.	Sept. 18, 1860.
30785	Bugher, Moses.	Indianapolis, Ind.	Creasing leather, machines for.	Nov. 27, 1860.
28628	Bullen, William S., assignor to self and Stephen A. Clark.	Jamestown, N. Y.	Mowing machines.	June 5, 1860.
26748	Bullock, Chester, assignor to self and De Forest Weld.	Baltimore, Md.	Collars, horse.	Jan. 10, 1860.
26748	Bunce, W. J., and C. D. Brown. (See Widdows, Frederick, assignor.)			
26966	Bunting, W. D.	Cleveland, Ohio.	Tanning skins and hides, compositions for.	Jan. 31, 1860.
27185	Burbank, Abner, assignor to George W. Burbank.	Brooklyn, N. Y.	Soldering irons.	Feb. 14, 1860.
30718	Burbidge, C. H.	Middletown, Conn.	Cotton scrapers.	Nov. 27, 1860.
29567	Burch, Lyman D.	Sherburne, N. Y.	Ploughs.	Aug. 14, 1860.
27103	Burchell, Richard.	Brooklyn, N. Y.	Mosquito nets and shades for windows.	Feb. 14, 1860.
29461	Burchell, Richard.	Brooklyn, N. Y.	Window shade fixture.	Aug. 7, 1860.
27520	Burdick, J. D.	Newbern, N. C.	Window blinds, operating the slats of.	Mar. 20, 1860.
29765	Burdine, A. H.	Chulahoma, Miss.	Gins, cotton.	Aug. 28, 1860.
29568	Burger, Edward G.	Ypsilanti, Mich.	Scraper, foot.	Aug. 14, 1860.
29950	Burger, H. R.	Richmond, Va.	Saws, machine for grinding.	Sept. 11, 1860.
27104	Burgess, A. (See Cooper, George, assignor.)	Williamsport, Pa.	Hydraulic engine.	Feb. 14, 1860.
30517	Burkin, John F., and Augustus Koch.	Philadelphia, Pa.	Cars, railroad, seats and couches for.	Oct. 23, 1860.
30294	Burke, Edmund, et al. (See Turner & Smith, assignors.)	Helena, N. Y.	Cows, stabling.	Oct. 9, 1860.
26647	Burke, Edward, assignor to self and A. Sulzer.	New York, N. Y.	Dovetailing machine.	Jan. 3, 1860.
29230	Burke, Patrick.	Warwick, R. I.	Casting needle threads, moulds for.	July 24, 1860.
30384	Burley, Thomas H.	Albany, N. Y.	Engines, steam and other, regulator for.	Oct. 16, 1860.
26648	Burlingame, S. S.	Milwaukee, Wis.	Match safe.	Jan. 3, 1860.
29667	Burnap, John A.	Montpelier, Vt.	Stones, machines for sawing.	Aug. 21, 1860.
30176	Burnell, Levi.	Pittsburg, Pa.	Valves, oscillating, for steam engines.	Sept. 25, 1860.
27591	Burnham, A. M.	Hastings, Mich.	Files, machine for cutting.	Mar. 20, 1860.
	Burnham, George, assignor to self, W. D. Rinehart, and C. A. Nauman.			
	Burr, D. Theodore, assignor to self, J. B. Lobdell, A. Pelham, and H. Burr.			

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
29462	Burr, Henry A. (See Taylor, Alvah B., assignor.)	Batavia, Ill.	Mills, portable	Aug. 7, 1860.
29358	Burridge, Thomas H.	St. Louis, Mo.	Ploughs, steam	July 31, 1860.
27689	Burroughs, Jesse	Ridgeway, Pa.	Coal and ores, purification of	April 3, 1860.
30027	Burrows, Henry, assignor to self and E. W. Woodruff.	Georgetown, D. C.	Fences	Sept. 4, 1860.
28151	Burrows, Stephen	Whitewater, Wis.	Hullers, rice and clover	May 8, 1860.
28830	Burson, W. W.	Yates, Ill.	Grain binders	June 25, 1860.
27539	Burton, James Henry	Jefferson county, Va.	Gun barrels, manufacture of	Mar. 20, 1860.
29542	Burton, O. F., assignor to self and M. H. Hovey	New York, N. Y.	Fire escape	Aug. 7, 1860.
28152	Bury, William A.	Grosse Isle, Mich.	Bill of fare	May 8, 1860.
	Buser, John, and Heinemann. (See Heinemann & Buser.)			
27105	Buser, Samuel and John H.	Warren, Ill.	Harvesters	Feb. 14, 1860.
28558	Bush, Thacker V.	Gallatin, Tenn.	Preserving roots, house for	June 5, 1860.
27427	Bush, Walter R.	Albany, N. Y.	Carriages, wheel and dress guard for	Mar. 13, 1860.
27614	Bushnell, William	Eaton, Pa.	Cultivators	Mar. 27, 1860.
28153	Busser, Jacob, and James B. Harmer	Philadelphia, Pa.	Railroad cars, &c., machinery for propelling	May 8, 1860.
	Butler, D. C., and H. L. McNish. (See McNish, H. L., assignor.)			
28647	Butler, John	Brooklyn, N. Y.	Gas tubes, flexible	June 12, 1860.
27346	Butler, James Lawrence, William S. Hosford, and D. Walter Smith.	Brooklyn, N. Y.	Lamps, burners of vapor	Mar. 6, 1860.
27268	Butler, Joseph M.	Oxford, Miss.	Wells, implements for boring	Feb. 28, 1860.
29214	Butler, Lester, assignor to self and C. B. Ford	Kenosha, Wis.	Gates, railroad	July 17, 1860.
30561	Butler, M. A.	Mariana, Fla.	Soap, composition for	Nov. 6, 1860.
27034	Butler, John	Buffalo, N. Y.	Mowing and reaping machines	Feb. 7, 1860.
	Butman, E. E., et al. (See Turner, Joshua, assignor.)			
30385	Butterfield, George, and Daniel Bowker	Boston, Mass.	Curtains, window	Oct. 16, 1860.
27690	Butterfield, Tyrannus P.	Indianapolis, Ind.	Shingle machines, device for lifting the bolt in	April 3, 1860.
26883	Buttles, R. P.	Mansfield, Pa.	Traps, animal	Jan. 24, 1860.
28964	Buttles, R. P.	Mansfield, Pa.	Wrenches	July 3, 1860.
26749	Button, Lysander, and Robert Blake	Waterford, N. Y.	Coupling, hose	Jan. 10, 1860.
30909	Button, Lysander, and Robert Blake	Waterford, N. Y.	Coupling for hose pipe	Dec. 18, 1860.
27967	Buxton, Levi W.	Nashua, N. H.	Trap, animal	April 24, 1860.
28233	Buxton, Levi W., assignor to self and Mark Starrett	Nashua, N. H.	Bed bottom	May 8, 1860.
29540	Buxton, Levi W., assignor to self and R. B. Cram	Nashua, N. H.	Bed bottom	Aug. 7, 1860.
	Byington, A., and D. Wood. (See Wood & Byington.)			
30786	Byler, Jacob R., assignor to self and Hugh W. Black	Salisbury, Pa.	Rakes for reaping machines	Nov. 27, 1860.
30852	Byler, Jacob R., assignor to self and Hugh W. Black	Salisbury, Pa.	Rakes for reaping machines	Dec. 4, 1860.
	Byrd, G. W., and T. Newcomb. (See Newcomb & Byrd.)			
28064	Byrd, John A.	Jackson county, Fla.	Plough stocks	May 1, 1860.
27615	Byrn, M. L.	New York, N. Y.	Cork screws	Mar. 27, 1860.
29056	Byrne, Thomas	Baton Rouge, La.	Water, method of cooling	July 10, 1860.
29860	Byrne, Thomas	Baton Rouge, La.	Sulphurous acid to cane juice, mode of applying	Sept. 4, 1860.
29859	Byrne, Thomas	Baton Rouge, La.	Preparation of flour	Sept. 4, 1860.
30461	Byrne, Thomas	Baton Rouge, La.	Refrigerator	Oct. 23, 1860.

27966	Cabot, F. S. (See Chichester, L. S., assignor.)	Cincinnati, Ohio.	Carpenters' clamp	April 24, 1860.
29951	Cadwell, John.	Tomah, Wis.	Jack screws or other hoisting apparatus, self adjusting braces for.	Sept. 11, 1860.
26890	Cake, Henry L.	Pottsville, Pa.	Screens, coal	Jan. 24, 1860.
29463	Caldwell, David B.	Cincinnati, Ohio.	Straw cutters	Aug. 7, 1860.
29649	Calkins, James.	Hudson, N. Y.	Gas, manufacture of hydrocarbon	Jan. 3, 1860.
28154	{ Calkins, James, Philip A. Hover, and Charles W. Grannis.	Hudson, N. Y.	Furnace for the combustion of coal, oil, and similar hydrocarbon fluids.	May 8, 1860.
30703	Callender, M. L., assignor to self, Warren Chemical and Manufacturing Co., and Ebert Perce.	New York, N. Y.	Burners, hydrocarbon	Nov. 20, 1860.
1190	Cambridge, P. C., jr.	Enfield, N. H.	Bedsteads	Jan. 24, 1860.
27347	Cameron, Joshua F.	Livingston county, Me.	Ploughs, shovel	Mar. 6, 1860.
28831	Cameron, Joshua F.	Livingston county, Me.	Cultivators	June 26, 1860.
28965	Cameron, Story & Malone. (See Story, Jere. H., assignor.)	Jersey City, N. J.	Anchors, apparatus for working	July 3, 1860.
30957	Campbell, Angus.	Roxbury, Mass.	Boiler, steam	Dec. 18, 1860.
28648	Campbell, Benjamin F.	Newtown, Conn.	Steam stuffing box for revolving rolls	June 12, 1860.
26831	Campbell, Hugh.	Georgetown, Canada West.	Printing addresses on newspapers, &c., apparatus for	Jan. 17, 1860.
27269	Campbell, James A.	Jersey City, N. J.	Photographic plate shield	Feb. 28, 1860.
27269	Campbell, W. (See Fry & Leely, assignors.)	Philadelphia, Pa.	Stoves	Apr. 24, 1860.
28035	Cantelo, W. I., assignor to Stewart & Peterson	Holmes county, Miss.	Ploughs	Aug. 14, 1860.
29569	Canterberry, Samuel.	Cleveland, Ohio	Jack, carriage	Sept. 25, 1860.
30120	Capron, E. P. H., et al. (See Hotchkiss, James, assignor.)	Cincinnati, Ohio.	Fireplaces	April 17, 1860.
27886	Card, J.	Sag Harbor, N. Y.	Alarm for drawers	Jan. 10, 1860.
26813	Card, Thomas F.	Rome, Ga.	Cultivators	Feb. 14, 1860.
27106	Carey, Abner	Rome, Ga.	Planters, cotton seed	Feb. 14, 1860.
27107	Carey, Abner	Lynn, Mass.	Bank notes, manufacture of	April 10, 1860.
27857	Carey, Augustus C., assignor to self and Joseph Storey	Cambridge, Mass.	Medallion likeness of Theodore Parker	Nov. 13, 1860.
1340	Carew, Thomas A.	Waterbury, Conn.	Cotton pickers, hand	Mar. 6, 1860.
27348	Cargill, William B.	Grenada, Miss.	Casting screw augers	Aug. 21, 1860.
29668	Carl, J., and James W. Heath	Cumminsville, Ohio	Horse shoe	Jan. 17, 1860.
26832	Carlin, Joseph	Woodstock, Vt.	Hammer, nail	Oct. 16, 1860.
30386	Carlisle, Charles	Greenwood, S. C.	Sawing shingles from the bolt, machine for	June 19, 1860.
28734	Carlisle, John M.	Middletown, N. Y.	Chair, reclining	Mar. 20, 1860.
27521	Carman, Sarah D.	Roxbury, Mass.	Bolt, flush	May 22, 1860.
28346	Carnes, William R.	North Attleboro', Mass.	Watch chains	June 19, 1860.
28735	Carpenter, Charles B., assignor to Albert C. Tift	Martin's Ferry, Ohio.	Grinding apples, machine for	Jan. 24, 1860.
26892	Carpenter, George, et al. (See Thompson, C. H., assignor.)	Elgin, Ill.	Lock, permutation	Feb. 21, 1860.
27202	Carpenter, Geo. O., et al. (See Brown & Banker, assignors)			
	Carpenter, Geo. O., et al. (See Banker, Geo. W., assignor.)			
	Carpenter, Isaac T.			
	Carpenter, Jolly & Ryder. (See Ryder, Carpenter & Jolly.)			
	Carpenter, William A.			
	Carper, J. H., and George L. Griffin. (See Griffin & Carper.)			
	Carr, C. G., and H. H. Robertson. (See Robertson & Carr.)			
	Carr, John H., and E. Andrews. (See Andrews & Carr.)			
27622	Carr, William S.	New York, N. Y.	Valves for water closets	Mar. 20, 1860.
30462	Carr, William S.	New York, N. Y.	Valves for water closets	Oct. 23, 1860.
30201	Carre, Ferdinand Philip Edward	Paris, France	Freezing liquids, apparatus for	Oct. 23, 1860.
28252	Carrier, Asa L.	Washington, D. C.	Saw set	May 15, 1860.

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
27349	Carrier, Lucius	East Douglass, Mass	Knife handles	Mar. 6, 1860.
27350	Carrington, N. R.	Coldwater, Miss.	Planters, seed	Mar. 6, 1860.
26884	Carroll, Thomas U.	Baltimore, Md.	Lamp, self-lighting	Jan. 24, 1860.
28347	Carson, Alfred.	New York, N. Y.	Fireplace	May 22, 1860.
30121	Carson, Alfred.	New York, N. Y.	Stench-trap for sinks	Sept. 25, 1860.
28451	Carson, A., and C. Doolittle. (See Doolittle & Carson.)	New York, N. Y.	Coffins	May 29, 1860.
27035	Carter, Cyrus L., and Eleazer Jones	San Francisco, Cal.	Amalgamators	Feb. 7, 1860.
27036	Carter, George W.	Champlain, N. Y.	Carriage springs, adjustable	Feb. 7, 1860.
29245	Carter, Ira.	Albany, N. Y.	Stove and furnace grates	July 24, 1860.
30295	Carter, John V. B.	Union City, Ind.	Cultivators	Oct. 9, 1860.
	Carter, M. S., et al. (See Wall, Roberts & Carter.)			
	Carter, N. C.			
	Carter, Wall & Roberts. (See Wall, Roberts & Carter.)			
26731	Carton, John. (See Stuber, John, assignor.)	Baltimore, Md.	Steam, superheating	Jan. 3, 1860.
29464	Carvalho, Solomon N., assignor to self and L. H. Bowen ..	Brazil, South America	Propeller, marine	Aug. 7, 1860.
	Carver, George L.			
	Carville, J. M., and G. B. Mickle. (See Mickle & Carville.)			
	Case, James H. (See Ask, Justus, assignor.)			
29861	Case, Sharon	Lumpkin, Ga.	Boards, machine for thinning	Sept. 4, 1860.
27616	Casey, Cullen.	Goldsboro', N. C.	Cultivators	Mar. 27, 1860.
30296	Casner, Ezekiel.	Penn Yan, N. Y.	Mill bush	Oct. 9, 1860.
30387	Cassell, A. P.	Wataga, Ill.	Fire, sbrinking	Oct. 16, 1860.
28253	Castile, H. L.	Memphis, Tenn.	Axle boxes	May 15, 1860.
27203	Castor, Thomas.	Philadelphia, Pa.	Cars, passenger railway	Feb. 21, 1860.
30297	Cathcart, Robert.	Baltimore, Md.	Light for cars	Oct. 9, 1860.
29244	Cavanaugh, R. K., and H. Y. Lazear	Jersey City, N. J.	Stoves, cooking	July 24, 1860.
	Caven, William, and Hosea H. Huntley. (See Huntley & Caven.)			
30799	Center, W. R.	Athens, Ill.	Planters, corn	Dec. 4, 1860.
27270	Chabot, J. Theodore	Buffalo, N. Y.	Steering apparatus	Feb. 28, 1860.
26650	Chabot, J. Theodore	Buffalo, N. Y.	Ship's tillers	Jan. 3, 1860.
27969	Chace, Mervin R.	Fall River, Mass.	Casting molasses gates	Apr. 24, 1860.
27405	Chadwick, Wm., assignor to self and William Griffiths ..	Bury, England	Ventilators	Mar. 6, 1860.
26833	Chafee, Vosco M.	Xenia, Ill.	Ploughs	Jan. 17, 1860.
26834	Chafee, Vosco M.	Xenia, Ill.	Printing press	Jan. 17, 1860.
26968	Chafee, Vosco M., assignor to self and C. De Witt Smith ..	Xenia, Ill.	Clevis, clamp for making	Jan. 31, 1860.
27523	Chafee, Vosco M.	Xenia, Ill.	Mowing and reaping machines	Mar. 20, 1860.
	Chalmers, Thomas, et al. (See Gates, Philetus W., ass'nor.)			
28559	Chalmers, Thomas, et al. (See Gates & Fraser, assignor.)	West Roxbury, Mass.	Leather splitting machines, feeds of	June 5, 1860.
	Chamberlain, Dexter H.			
	Chamberlain, O., and W. H. Babcock. (See Hardy, J., assignor.)			
27775	Chamberlaine, Samuel.	Philadelphia, Pa.	Gases, apparatus for generating	April 10, 1860.
26651	Chamberlin, David P.	Hudson, Mich.	Fruit gatherers	Jan. 3, 1860.
29669	Chamberlin, David P.	Hudson, Mich.	Trees, instrument for pruning	Aug. 21, 1860.

27774	Chamberlin, F.....	Berlin, Wis.....	Seeding machines.....	April 10, 1860.
28452	Chamberlin, John N.....	Troy, N. Y.....	Sewing machines.....	May 29, 1860.
29352	Chamberlin, M. C.....	Johnsborough, N. Y.....	Vehicles, self detachable whiffletrees for.....	Sept. 11, 1860.
30562	Chambers, Charles F.....	Chambersburg, Ind.....	Washing machines.....	Nov. 6, 1860.
	Chambers, Edwin and Cyrus, jr. (See Gallaher, John S., jr., assignor.)			
30204	Chambers, Cyrus, jr.....	Philadelphia, Pa.....	Press, copying.....	Oct. 2, 1860.
30719	Chambers, Cyrus, jr.....	Philadelphia, Pa.....	Paper, machines for folding.....	Nov. 27, 1860.
30910	Chambers, Cyrus, jr.....	Philadelphia, Pa.....	Paper folding machines.....	Dec. 18, 1860.
28065	Chambers, William.....	Muscatine, Iowa.....	Valves for steam engines, governor.....	May 1, 1860.
	Champion, J. (See Shaler & Rogers, assignors.)			
29246	Champion, Thomas and.....	Washington, D. C.....	Gas regulators.....	July 24, 1860.
28832	Champion, Charles.....	Eldorado county, Cal.....	Water elevators.....	June 26, 1860.
30800	Chandler, Samuel S.....	East Middlebury, Vt.....	Gongs, striking mechanism for.....	Dec. 4, 1860.
27430	Chantrell, John.....	Chelsea, Mass.....	Knitting machines.....	Mar. 13, 1860.
28255	Chantrell, John.....	Bristol, Conn.....	Knitting machines.....	May 15, 1860.
29744	Chapin, E. A., et al. (See Billings, Joseph D., assignor.)	Springfield, Mass.....	Cocks, stop.....	Aug. 21, 1860.
26814	Chapin, Henry A., assignor to William L. Schoener & Co..	St. Johnsbury, Vt.....	Mowing machines.....	Jan. 10, 1860.
	Chaplin, Orril R., assignor to self and O. G. Hale.....			
28966	Chapman, A. B. (See Otis, F. S., assignor.....	Hartford, Conn.....	Ice breaker.....	July 3, 1860.
30958	Chapman, Charles W.....	Poquetanuck, Conn.....	Woolen roving, machines for winding.....	Dec. 18, 1860.
29465	Chapman, J. A.....	Greenfield, Mass.....	Cutlery, handles for.....	Aug. 7, 1860.
26750	Chapman, Mathew.....	Mystic River, Conn.....	Presses, cotton and hay.....	Jan. 10, 1860.
30388	Chapman, Nathan.....	Darlington district, S. C.....	Sowing machines.....	Oct. 16, 1860.
30612	Chapman, Rowland.....	Norwich, Conn.....	Plum-bob.....	Nov. 13, 1860.
30666	Chappell, Benjamin F.....	Green, N. Y.....	Rakes, horse.....	Nov. 20, 1860.
27108	Chappell, John.....	Ashland, Ohio.....	Fan blowers.....	Feb. 14, 1860.
28883	Charles, Joseph B.....	Allegheny, Pa.....	Cultivators.....	June 26, 1860.
	Charlton, James.....			
	Charpantier, J. M. & A. B., et al. (See Jones & Charpantier.)			
	Charpantier, J. M. and J. M. Jones. (See Jones & Charpantier.)			
30020	Chase, Amos. assignor to Nathan C. Page.....	North Weare, N. H.....	Desks, school.....	Sept. 11, 1860.
28254	Chase, A. W.....	Ann Arbor, Mich.....	Bedsteads, invalid.....	May 15, 1860.
29570	Chase, Daniel S.....	Augusta, Ga.....	Propeller shafts, anti-friction rollers for.....	Aug. 14, 1860.
	Chase, North & North. (See Gibbs, S. W., assignor.)			
	Chase, North & North. (See Vedder, N. S., assignor.)			
	Chase, North & North. (See Smith & Brown, assignors.)			
	Chase, North & North. (See Sallor & Steffe, assignors.)			
	Cheever, John H. (See Parmelee, D. D., assignor.)			
	Cheever, John H. (See Mayall, Thomas J., assignor by mesne assignments.)			
28560	Cheever, Simon G.....	Boston, Mass.....	Paints, machines for mixing.....	June 5, 1860.
28256	Cheney, John L.....	Lowell, Mass.....	Winding laps, machinery for.....	May 15, 1860.
27617	Chenoweth, George E.....	Baltimore, Md.....	Harvesters.....	Mar. 27, 1860.
27858	Cherevoy, Edmund B., assignor to self and Thomas W. Weathered.	New York, N. Y.....	Hot water apparatus, boilers for.....	April 10, 1860.
28736	Chesley, James.....	Concord, N. H.....	Boot and shoe cleaning apparatus.....	June 19, 1860.
29862	Chester, Charles T.....	New York, N. Y.....	Electro-magnets.....	Sept. 4, 1860.
26889	Chesterman, William.....	Centralia, Iowa.....	Pots, coffee.....	Jan. 24, 1860.
26815	Chichester, Lewis S., and H. G. Evans.....	New York, N. Y.....	Gins, cotton.....	Jan. 10, 1860.
28533	Chichester, Lewis S., assignor to F. S. Cabot.....	New York, N. Y.....	Filters.....	May 29, 1860.

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
28967	Chichester, L. S.	New York, N. Y.	Lemon squeezer	July 3, 1860.
766	Chichester, Lewis S.	New York, N. Y.	Meat and vegetable chopper	Aug. 28, 1860.
29863	Chichester, Lewis S.	New York, N. Y.	Sad iron	Sept. 4, 1860.
30298	Chichester, Lewis S.	New York, N. Y.	Mill for grinding coffee	Oct. 9, 1860.
1248	Chilson, Gardner	Boston, Mass.	Range, cook's	June 12, 1860.
29767	Chisholm, Alexander M.	Antigonish, Nova Scotia	Quadrants (Design)	Aug. 28, 1860.
29849	Chism, John D.	Albany, N. Y.	Shingle machines	June 12, 1860.
29243	Chitterling, Charles	Dunkirk, N. Y.	Composition for lubricating purposes	July 24, 1860.
28257	Choate, Orville	Morrisville, Vt.	Mop wringer	May 15, 1860.
	Choate, W. C., et al. (See Alexander, Charles.)			
	Christie, Jonathan S., et al. (See Drake, Frederick H., assignor.)			
29768	Christian, Theodore	New York, N. Y.	Planing machine, rotary cutter head for	Aug. 28, 1860.
27776	Christopher, John G.	Byron, Ill.	Cultivators	April 10, 1860.
28155	Church, D. M., and C. H. Ellsworth	Birmingham, Conn.	Bosom expanders	May 8, 1860.
30911	Church, Josiah W.	Coldwater, Mich.	Hame tugs, fastening for	Dec. 18, 1860.
29138	Churchill, George	Hartford, Conn.	Sewing machines, spool pins for	July 17, 1860.
29571	Churchman, William H.	Janesville, Wis.	Furnace for heating buildings	Aug. 14, 1860.
	Cincinnati Foundry Company. (See Wells & Barth, assignors.)			
26691	Cinquini, Pietro	West Meriden, Conn.	Files	April 3, 1860.
28650	Cist, Francis, William Kossak and William H. Godfrey	St. Louis, Mo.	Carpets, tool for laying and stretching	June 12, 1860.
	Chadlin, N. W., et al. (See Kramer, A. J., assignor.)			
28711	Clapp, M. R., assignor to Silsby, Mynderse & Company	Seneca Falls, N. Y.	Boilers, steam	June 12, 1860.
28561	Clapp, Solan A.	Hamilton, Ill.	Packing flour, machine for	June 5, 1860.
30720	Clark, C. A.	Bloomfield, Iowa	Cultivators	Nov. 27, 1860.
28968	Clark, Council	Andersonville, Ga.	Cultivators	July 3, 1860.
29953	Clark, D. W.	Stratford, Conn.	Stirrups	Sept. 11, 1860.
30299	Clark, D. W.	Stratford, Conn.	Stirrups	Oct. 9, 1860.
27109	Clark, Elijah B.	Tallahassee, Fla.	Ploughs	Feb. 14, 1860.
29139	Clark, Elijah B.	Tallahassee, Fla.	Ploughs	July 17, 1860.
28834	Clark, E. D.	Earlville, N. Y.	Mills	June 26, 1860.
28234	Clark, Elisha, assignor to self and J. W. Paddon	New York, N. Y.	Paper file	May 8, 1860.
30959	Clark, Elisha	New York, N. Y.	Press, copying	Dec. 18, 1860.
28348	Clark, F. Y.	Savannah, Ga.	Dies used by dentists, metal, moulds for	May 22, 1860.
29057	Clark, George W.	Mt. Washington, Ohio	Seeding machines	July 10, 1860.
27524	Clark, James	Baltimore, Md.	Lock for railway cars, sealing	Mar. 20, 1860.
28651	Clark, James	Newark, N. J.	Prussian blue, manufacture of	June 12, 1860.
29247	Clark, James J.	Philadelphia, Pa.	Telegraphic repeaters	July 24, 1860.
26751	Clark, James M.	Philadelphia, Pa.	Mills, flour	Jan. 10, 1860.
27887	Clark, James M.	Philadelphia, Pa.	Bleaching of grain by sulphurous acid	April 17, 1860.
	Clark, J. M., and J. K. Robinson. (See Robinson & Clark.)			
28156	Clark, Joseph H.	West Brook, Me.	Wringing clothes	May 8, 1860.
26885	Clark, J. W., and J. V. S. Adriance. (See Adriance & Clark.)	Bridgeport, Conn.	Nut cracker	Jan. 24, 1860.
	Clark, Lyman A.			

27093	Clark, P. J., assignor to S. S. Clark. Clark, Stephen A., and W. S. Bullen. (See Bullen, William S., assignor.)	West Meriden, Conn.	Cigar or match cases.	April 3, 1860.
26835	Clark, Sylvanus S.	Manchester, N. H.	Hay or straw cutters.	Jan. 17, 1860.
28653	Clark, William A.	Bethany, Conn.	Auger, tenoning.	June 12, 1860.
27692	Clarke, Elizur E.	New Haven, Conn.	Walls, concrete, apparatus for building.	April 3, 1860.
27970	Clarke, Elizur E.	New Haven, Conn.	Walls, concrete.	April 24, 1860.
27204	Clarke, George B.	Leonardsville, N. Y.	Ventilating apparatus.	Feb. 21, 1860.
28652	Clarke, Joseph.	Syracuse, N. Y.	Lamps, vapor.	June 12, 1860.
30300	Clarke, T. Cottrell.	Camden, N. J.	Filters.	Oct. 9, 1860.
28125	Clarkson, Tillotson, assignor to B. F. Phillips & Co.	South Adams, Mass.	Looms.	May 1, 1860.
28258	Clay, Weed, Danforth & Gray. (See Gray, John, assignor)	Washington, D. C.	Lamps, vapor.	May 15, 1860.
28349	Clayton, T. G.	Crain Township, Ohio.	Saccharine juices, apparatus for evaporating.	May 22, 1860.
29058	Clemens, A. C.	Cincinnati, Ohio.	Saw mills.	July 10, 1860.
27205	Clement, Edwin B.	Barnet, Vt.	Churn.	Feb. 21, 1860.
29059	Clemo, Ebenezer.	Toronto, Canada.	Paper pulp, manufacture of.	July 10, 1860.
29670	Clemson, William.	Middletown, N. Y.	Saw set.	Aug. 21, 1860.
29671	Clemson, William.	Middletown, N. Y.	Saws, tempering.	Aug. 21, 1860.
30801	Cleveland, Edwin C.	Worcester, Mass.	Cloth, machines for stretching.	Dec. 4, 1860.
27256	Cleveland, N. B., assignor to Lyman Updike and J. M. Hosner.	Waupun, Wis.	Barrel heads, submerging.	Feb. 21, 1860.
29242	Cleveland, William.	New York, N. Y.	Curtain fixtures.	July 24, 1860.
30122	Cleveland, William.	Orange, N. J.	Faucets.	Sept. 25, 1860.
30667	Clewell, Jacob L., jr., and William F. Schatz.	Nazareth, Pa.	Apple and potato parer.	Nov. 20, 1860.
28737	Clewley, Charles W.	Providence, R. I.	Watches, method of constructing rims for.	June 19, 1860.
29359	Cliff, John W.	Rochester, N. Y.	Register point.	July 31, 1860.
28350	Clifton, Joseph H.	New Castle, Pa.	Bands for machinery.	May 22, 1860.
28453	Clifton, Joseph H.	New Castle, Pa.	Looms.	May 29, 1860.
30463	Cline, John C.	Camden, N. J.	Sawing machines, arrangement of mechanism in.	Oct. 23, 1860.
27694	Clinger, P. S.	Conestoga Centre, Pa.	Cultivators, hand.	April 3, 1860.
29572	Clinger, P. S.	Conestoga Centre, Pa.	Fodder, machine for cutting.	Aug. 14, 1860.
27110	Clinton, Henry E.	Woodbridge, Conn.	Carriages, thill attachment for.	Feb. 14, 1860.
29060	Closs, Jacob, and Isaac N. Pyle.	Decatur, Ind.	Water wheels.	July 10, 1860.
28454	Clow, R. F., et al. (See Rowe, John L.)	Auburn, N. Y.	Barometers.	May 29, 1860.
29466	Coates, Amos.	Marlborough, Ohio.	Pumps, chain.	Aug. 7, 1860.
30613	Cobb, A. F.	Chapel Hill, Mo.	Alarms, fire.	Nov. 13, 1860.
28835	Cobb, James M.	Jackson, Tenn.	Cotton scrapers.	June 26, 1860.
28836	Cobb, James M.	Jackson, Tenn.	Ploughs.	June 26, 1860.
28562	Cobb, Seward P.	South Danvers, Mass.	Leather, machine for finishing.	June 5, 1860.
29140	Cochran, Davis J.	Centreville, Ind.	Tanning, compounds for.	July 17, 1860.
27428	Cochran, John W.	New York, N. Y.	Cartridge for fire-arms.	Mar. 13, 1860.
30123	Cochran, J. W.	New York, N. Y.	Projectiles.	Sept. 25, 1860.
27777	Cockburn, John.	New York, N. Y.	Pen and pencil case.	April 10, 1860.
27271	Codling, Joseph, jr., and John McCunniff.	Fairbanks, Iowa.	Boilers, steam, feed water heaters for.	Feb. 28, 1860.
30124	Cody, Patrick.	Hamilton, N. Y.	Clothes frame.	Sept. 25, 1860.
30527	Coe, Wesley A.	Greensboro', N. C.	Peach parer.	Oct. 30, 1860.
28157	Coes, Loring and Aury G.	Worcester, Mass.	Rolling the shanks and bars of screw wrenches.	May 8, 1860.
29350	Coes, Loring and Aury G.	Worcester, Mass.	Screw wrenches, machine for heading.	July 31, 1860.
29141	Coffin, Eleazar.	Indianapolis, Ind.	Mortising machine.	July 17, 1860.

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
30464	Coffin, F. J., <i>et al.</i> (See Walcott, F., assignor.)	Hayesville, Ohio.	Washing machines.	Oct. 23, 1860.
28654	Coffin, James B.	Buffalo, N. Y.	Bolting chest	June 12, 1860.
30614	Cogswell, M. C., and John McKiernan	Baltimore, Md.	Warming apparatus.	Nov. 13, 1860.
28938	Colbert, Lewin A.	Newport, N. H.	Harrows.	June 26, 1860.
27525	Colby, A. Frank, and John A. Brashaw. (See Brashaw & Colby.)	Newport, N. H.	Stoves, cooking, fruit drying attachment to	Sept. 18, 1860.
27695	Colby, Daniel C., assignor to self and James P. Upham	Waterbury, Vt.	Clothes wringer.	Dec. 4, 1860.
27111	Colby, Daniel C., assignor to self and Edmund Burke	Groton, N. Y.	Jacks, wagon.	Mar. 20, 1860.
28655	Colby, George J.	New York, N. Y.	Mills, quartz, attaching the grinding surfaces of.	April 3, 1860.
28126	Colby, Lucius H.	Medway, Mass.	Stoves	Feb. 14, 1860.
28656	Coleman, Ezra.	New Orleans, La.	Mills	June 12, 1860.
	Coleman, John W.	Providence, R. I.	Mousing hooks	May 1, 1860.
	Coleman, Leonard	Philadelphia, Pa.	Horse shoes	June 12, 1860.
	Coleman, Stephen G., ass'r to self and William Coleman.	Philadelphia, Pa.		
	Coleman, Thomas M.			
	Coleman, William, <i>et al.</i> (See Coleman, Stephen G., assignor.)			
26967	Colhoun, George	Philadelphia, Pa.	Ventilators	Jan. 31, 1860.
30177	Collender, Hugh W., assignor to self and M. Phelan.	New York, N. Y.	Billiard tables, cushions for	Sept. 25, 1860.
30205	Collender & Phelan. (See Ellicott, George P., assignor.)			
30528	Collender & Phelan. (See Ellicott, James P., assignor.)			
28738	Collier, Francis J.	Philadelphia, Pa.	Label holder.	Oct. 2, 1860.
27888	Collier, Horace	Smithville, Ark.	Delineating the courses of rivers, machine for	Oct. 30, 1860.
	Collins, Cornelius	Brooklyn, N. Y.	Rope, wire, machinery for making.	June 19, 1860.
	Collins, Edwin S.	Aspen Wall, Va.	Presses, tobacco.	April 17, 1860.
30206	Collins, J. G., and N. S. Bean. (See Bean & Collins.)	Troy, N. Y.	Shafting, hanger for.	Oct. 2, 1860.
30721	Collins, James P.	Clinton, La.	Cotton scrapers.	Nov. 27, 1860.
30615	Collins, J. W., and R. Y. Wilkinson	Sacramento, Cal.	Sewing machines, loop catches for	Nov. 13, 1860.
30668	Collins, Lyman P.	Canton, Conn.	Tools, edge.	Nov. 20, 1860.
30722	Collins, Samuel W.	Freeport, Ill.	Glass cutters.	Nov. 27, 1860.
27618	Collmann, John, and Harm Feenders	Philadelphia, Pa.	Paddle wheels.	Mar. 27, 1860.
29142	Collyer, George, and A. Hamilton Patterson.	Philadelphia, Pa.	Cars, city railroad, coupling for	July 17, 1860.
29954	Collyer, George, and A. H. Patterson.	Appoquinimink Hundred, Del.	Couplings for city railways	Sept. 11, 1860.
	{ Collyer, George, and A. H. Patterson. (See Nicholson & Colton.)	Philadelphia, Pa.		
30563	Colton, A. B., and R. Nicholson. (See Nicholson & Colton.)	Athens, Ga.	Threshing machines, spike for.	Nov. 6, 1860.
30616	Colton, Albert B.	Galesburg, Ill.	Water from wells, apparatus for drawing.	Nov. 13, 1860.
26652	Colton, G. D.	Pittsburg, Pa.	Steering apparatus	Jan. 3, 1860.
28657	Colton, William, <i>et al.</i> (See Offley, Michael, assignor.)	Pittsburg, Pa.	Rollers, steam	June 12, 1860.
28351	Colvin, James S.	Cincinnati, N. Y.	Milkers, cow	May 22, 1860.
28455	Colvin, James S.	Cincinnati, N. Y.	Milkers, cow	May 29, 1860.
30207	Colvin, L. O.	Charleston, S. C.	Saddles	Oct. 2, 1860.
	Comley, Jones & Fetter. (See Fetter, George, assignor.)			
	Commings, John.			

30870	Commung, Jean.....	New Orleans, La.....	Cane juice, apparatus for applying sulphurous acid gas in purification of.....	Dec. 11, 1860.
28352	Compton, William.....	New York, N. Y.....	Pianoforte action.....	May 22, 1860.
29061	Compton, William.....	New York, N. Y.....	Pianos, bridges for.....	July 10, 1860.
27889	Conant, Hezekiah.....	Willimantic, Conn.....	Looms.....	Apr. 17, 1860.
	Conant & Ives. (See Ives & Conant.)			
	Conkling, G. S., and W. H. Elliott. (See Elliott & Conkling.)			
27859	Conkling, T. O., et al. (See Ballantine, A. T., ass'r.)	Port Huron, Mich.....	Concentrated extracts for tanning purposes.....	Apr. 10, 1860.
29143	Connell, James.....	Port Huron, Mich.....	Preparation of tanning extracts.....	July 17, 1860.
26888	Connolly, Thomas.....	Philadelphia, Pa.....	Lamps, burners for vapor.....	Jan. 24, 1860.
	Conner, Thomas J. O., et al. (See Williams, William L., assignor.)			
27272	Conover, Lewis T.....	Philadelphia, Pa.....	Lamps, vapor.....	Feb. 28, 1860.
27351	Conradt, Augustus.....	Philadelphia, Pa.....	Metal, sheet, forming hollow articles of.....	Mar. 6, 1860.
28158	Constantine, Ernst.....	New York, N. Y.....	Evaporating liquids, apparatus for.....	May 8, 1860.
29121	Contrell, John, assignor to self and Joseph Contrell.....	New York, N. Y.....	Washing machine.....	July 10, 1860.
29769	Conway, Edward.....	Dayton, Ohio.....	Heating and cooking apparatus.....	Aug. 28, 1860.
27429	Conway, J. W.....	Franklin, Ind.....	Presses, cotton and hay.....	Mar. 13, 1860.
28629	Cook, Isaac, assignor to self and Hugh McClure.....	Mount Pleasant, Iowa.....	Washboard.....	June 5, 1860.
27696	Cook, John.....	Buffalo, N. Y.....	Lathes.....	April 3, 1860.
29340	Cook, Roswell, assignor to self, Frank G. Johnson, and M. J. Whitmore.....	Pottsdam, N. Y.....	Fire-arms, breech-loading.....	July 24, 1860.
27697	Cooke, J. C.....	Middletown, Conn.....	Iron, welding wrought.....	Apr. 3, 1860.
27860	Cooke, James C., assignor to the Russell Manufacturing Company.....	Middletown, Conn.....	Looms.....	Apr. 10, 1860.
29130	Cooke, James C., assignor to self and D. C. Sage.....	Middletown, Conn.....	Files, machine for cutting.....	July 10, 1860.
30208	Cooke, James Cooper.....	Middletown, Conn.....	Tools, machine for sharpening.....	Oct. 2, 1860.
28969	Cooley, Aaron B.....	Philadelphia, Pa.....	Cars, dumping railroad.....	July 3, 1860.
27890	Coombs, George.....	West Falls, N. Y.....	Mangle.....	Apr. 17, 1860.
30048	Cooper, Charles H.....	New York, N. Y.....	Lamps, torch, mode of hanging.....	Sep. 18, 1860.
27592	Cooper, George, assignor to A. Burgess.....	Hartford, Conn.....	Bench clamp.....	Mar. 20, 1860.
	Cooper, George, et al. (See Tiffany, E., ass'r.)			
	Cooper, James M., and William S. Lavelly. (See Ells, Joseph, assignor.)			
27526	Cooper, James M. (See Marston, Stanhope W., ass'r.)	Pittsburg, Pa.....	Fire-arms, revolving.....	Mar. 20, 1860.
29864	Cooper, J. Maslin.....	Pittsburg, Pa.....	Fire-arms, revolving.....	Sep. 4, 1860.
29544	{ Cooper, John M., and William L. Haller, assignors to John M. Cooper.....	Chambersburg, Pa.....	Cans, sealing fruit.....	Aug. 7, 1860.
27698	Cooper, John P.....	Carlisle, Pa.....	Crank, machine for overcoming the dead points of the.....	Apr. 3, 1860.
28970	Cooper, N. B.....	Finleyville, Pa.....	Churn.....	July 3, 1860.
28653	Cooper, Sumner.....	Gratis, Ohio.....	Window sash supporter.....	Jan. 3, 1860.
27699	Cooper, William.....	Windsor, Conn.....	Excavators, dirt loading apparatus for.....	Apr. 3, 1860.
29467	Coover, Jacob.....	Mount Gilead, Ohio.....	Wiring blind rods.....	Aug. 7, 1860.
27273	Copeland, George.....	Chambersburg, Pa.....	Seeding machines.....	Feb. 28, 1860.
28739	Corbett, E. M.....	Gray, Me.....	Photographic cameras.....	June 19, 1860.
27274	Corbin, L. B.....	New York, N. Y.....	Separators, grain.....	Feb. 28, 1860.
	Corbin, P. and F. (See Ottner, Joseph, assignor.)			
29144	Corduan, Joseph.....	Brooklyn, N. Y.....	Type metal with brass, mode of coating.....	July 17, 1860.
30723	Cornick, Tully R.....	Cap Au Gris, Mo.....	Ploughs.....	Nov. 27, 1860.

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
27528	Cornell, J. B. and W. W., & Co. (See Pomeroy, E. G., assignor.)	New York, N. Y.	Column, double cylinder fire-proof.	Mar. 20, 1860.
27527	Cornell, John B.	New York, N. Y.	Safes	Mar. 20, 1860.
28259	Cornell, John B. and William W.	New York, N. Y.	Shutters, metallic rolling.	May 15, 1860.
29123	Corser, S. A., assignor to self and J. A. Nims	Northampton, Mass.	Castings, moulds for	July 10, 1860.
29062	Corson, A. L. (See Stuart & Corson.)	Corson's P. O., Pa.	Laths, machine for sawing bevels on	July 10, 1860.
29248	Cort, Thomas, et al. (See Richardson, Mark, ass'r.)	Lebanon, Ill.	Furnace grates	July 24, 1860.
30724	Cory, Charles F.	Lebanon, Ill.	Furnaces	Nov. 27, 1860.
28159	Coster, Haro J.	Chicago, Ill.	Chair, rocking	May 8, 1860.
29145	Coster, Haro J.	Chicago, Ill.	Flower stands	July 17, 1860.
29468	Cottingham, G. W., and John S. Menefee.	Texana, Texas	Trap, ant.	Aug. 7, 1860.
28127	Cotton, John, and B. H. Howell. (See Appleton, Charles J., assignor.)	Brooklyn, N. Y.	Bedstead, folding	May 1, 1860.
28066	Cott, Edward, assignor to H. Hauff.	Middlefield, Conn.	Cannon, toy	May 1, 1860.
27593	Couch, J. O.	Brooklyn, N. Y.	Sewing machines	Mar. 20, 1860.
29063	Couch, Joseph J., assignor to Josiah S. Swan.	Princeton, Ill.	Grain, machine for binding	July 10, 1860.
29361	Courser, Thomas	Bangor, Me.	Harness buckle	July 31, 1860.
30529	Covell, J. W.	North Middletown, Ky.	Straw cutters	Oct. 30, 1860.
27529	Covell, Warren, et al. (See Turner, J., ass'r.)	Great Bend, Ohio.	Tanning apparatus	Mar. 20, 1860.
27778	Cox, Abraham and Joseph, et al. (See Vedder, N. S., assignor.)	Vernon, Ind.	Fire-arms, breech loading.	Apr. 10, 1860.
26836	Cox, Calvin.	Coxville, N. C.	Bonnet fronts, formers for	Jan. 17, 1860.
30389	Cox, George A.	Brooklyn, N. Y.	Engines, rotary	Oct. 16, 1860.
26837	Cox, Justice, et al. (See Belfield, Henry, ass'r.)	New York, N. Y.	Engines, hot air	Jan. 17, 1860.
27406	Cox, Kenyon and Theodore	Washington, D. C.	Cultivators	Mar. 6, 1860.
30049	Cox, Whiteman & Cox. (See Smith & Brown, ass'rs.)	State Line City, Ind.	Bed bottom springs	Sep. 18, 1860.
28658	Cox, Whiteman & Cox. (See Steffe & Sailor, ass'rs.)	Lockport, N. Y.	Dry dock, marine	June 12, 1860.
29249	Coyle, John, et al. (See Tompert & Coyle.)	New Bedford, Mass.	Stoves, coal	July 24, 1860.
28563	Craig, Benjamin F.	Plainfield, N. J.	Bridle bit.	June 5, 1860.
28587	Craig, Robert, assignor to self and J. D. Ludlow	New York, N. Y.	Cotton, wire screens for cleaning	Jan. 24, 1860.
28587	Cram, R. B., et al. (See Buxton, Levi W., ass'r.)	Lowell, Mass.		

27037	Crane, John H.	Charlestown, Mass.	Beds, sofas, &c., spring foundation for.	Feb. 7, 1860.
27700	Crane, John H.	Charlestown, Mass.	Bed spring.	April 3, 1860.
28659	Crane, J. W., jr.	Freeport, Ill.	Washing machines.	June 12, 1860.
30390	Crane, Roswell, and William Baldwin.	Anamosa, Iowa.	Tanning.	Oct. 16, 1860.
27530	Crane, Richard T.	Chicago, Ill.	Furnaces, air heating.	Mar. 20, 1860.
26873	Crane, S. G., assignor to self, and Charles C. Barton, assignor to S. G. Crane and Conrad B. Denny.	Rochester, N. Y.	Sash supporters, friction.	Jan. 17, 1860.
29573	Crans, L. J., et al. (See Reed, John H., assignor.)	New London, Conn.	Fire-arms, projectiles of.	Aug. 14, 1860.
29865	Cranston, Richmond, and Henry Bates.	Piqua, Ohio.	Threshing machines.	Sept. 4, 1860.
30617	Crawford, A. B.	Rockport, Ind.	Grafting machines.	Nov. 13, 1860.
30669	Crawford, James W.	Philadelphia, Pa.	Stoves, gas.	Nov. 20, 1860.
26886	Crenshaw, C. W., et al. (See Shipp & Crenshaw.)	Troy, N. Y.	Stoves, cooking.	Jan. 24, 1860.
26664	Creshore, H. C., et al. (See Pratt, H. T., assignor.)	Pittsburg, Pa.	Engines, steam.	Jan. 3, 1860.
26654	Cressman, Isaac.	Pittsburg, Pa.	Valves, steam.	Jan. 3, 1860.
30960	Cridge, E. J.	Chatfield, Minn.	Water wheels.	Dec. 18, 1860.
30871	Cridge, Matthew, and Samuel Wadsworth.	Yawboro, N. C.	Seeding machines.	Dec. 11, 1860.
26655	Crissey, Jud.	Cynthiana, Ky.	Ploughs.	Jan. 3, 1860.
29124	Crofoot, Horace.	Buffalo, N. Y.	Lamps, vapor.	July 10, 1860.
27432	Crompton, George. (See Marshall, Moses, assignor.)	Fredonia, N. Y.	Valve gear of steam engines, eduction.	Mar. 13, 1860.
27431	Cromwell, Henry F.	Fredonia, N. Y.	Valve gear of steam engines, induction.	Mar. 13, 1860.
30374	Crooker, Erastus, assignor to self and I. T. Upson.	Nantucket, Mass.	Punching nail holes, machine for.	Oct. 9, 1860.
26838	Crosby, Addison.	New York, N. Y.	Saws, filing.	Jan. 17, 1860.
27779	Crosby, Charles W.	New York, N. Y.	Saws.	April 10, 1860.
27948	Crosby, Charles W.	New York, N. Y.	Fire escape.	June 19, 1860.
30301	Cross, Christopher G., assignor to self and G. H. Bailey.	Chicago, Ill.	Sewing machines, tension apparatus for.	April 17, 1860.
30704	Crossman, C. P., and J. B. Brown.	Warren, Mass.	Stove radiators.	Oct. 9, 1860.
28160	Crotzer, William, assignor to self and Samuel Beamer.	Spruce Creek, Pa.	Grain cleaning machines.	Nov. 20, 1860.
28161	Crow, Andrew.	Middlefield, Mass.	Rifle cane.	May 8, 1860.
28838	Crowell, C. G., et al. (See Briggs, Stephen A., assignor.)	Chelsea, Mass.	Yarns, machinery for spinning.	May 8, 1860.
27206	Crowell, C. L., and R. Smith. (See Massey, William, assignor.)	Salisbury, Conn.	Balances, spring.	June 26, 1860.
27275	Crowell, J. E.	Oswego, N. Y.	Hoops, machine for cutting and distancing the locks on.	Feb. 21, 1860.
28660	Crowell, William A.	Dayton, Ohio.	Valves, operating governor for steam engine.	Feb. 28, 1860.
28631	Crozier, Archibald H.	Augusta, Ga.	Car coupling.	June 12, 1860.
26891	Crutchfield, W. G.	Portland, Me.	Gearing.	June 5, 1860.
27276	Culpepper, William W.	Portland, Me.	Chains.	June 5, 1860.
30125	Cummings, D. M., and E. M. Dyer. (See Dyer & Cummings.)	Meriden, Conn.	Spectacle cases, catch for.	Jan. 24, 1860.
28631	Cummings, J. A., et al. (See Trittin, Emil, assignor.)	West Middleton, Pa.	Churn.	Feb. 28, 1860.
28630	Cummings, Perley D., assignor to D. H. Furbish.	Paris, Mo.	Ploughs.	Sept. 25, 1860.
26891	Cummings, Perley D., assignor to D. H. Furbish.	Franklin, Tenn.	Coffins.	Aug. 14, 1860.
27276	Cummings, George N.	Bath, Me.	Cotton plants, machine for cutting up.	Mar. 6, 1860.
30125	Cunningham, A. W.			
30125	Cunningham, G. W.			
30125	Cunningham, J. G., and S. Bourne, jr. (See Bourne & Cunningham.)			
1310	Cunningham, John D.			
27352	Currier, B. T.			

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
26969	Currier, Jacob B., and Andrew J. Simpson.....	Lowell, Mass.....	Thermometers, arrangement of air and mercurial.....	Jan. 31, 1860.
26752	Curtice, R. M.....	North Adams, Mich.....	Mills, cider.....	Jan. 10, 1860.
27207	Curtis, S. S.....	Croton Corners, N. Y.....	Stoves, cooking.....	Feb. 21, 1860.
30465	Curtiss, Charles W.....	New Haven, Conn.....	Bucket, collapsible.....	Oct. 23, 1860.
29672	Cushman, Ephraim and John R.....	Amherst, Mass.....	Paper stock, leather, manufacture of.....	Aug. 21, 1860.
26971	Cushman, L. E., and J. S. French.....	North Bloomfield, Cal.....	Rock drills.....	July 3, 1860.
30209	Custer, Adle & Miles. (See Adle, Miles & Custer.)			
30209	Custer, J. D.....	Norristown, Pa.....	Saw grinding machine.....	Oct. 2, 1860.
27780	Cutter, A., and E. S. Wright.....	New York, N. Y.....	Carpet beater and cleaner.....	April 10, 1860.
28837	Daboll, Celadon L.....	New London, Conn.....	Alarms, fog.....	June 26, 1860.
30803	Daboll, Charles M.....	New London, Conn.....	Gauge, pressure.....	Dec. 4, 1860.
27531	Daggett, S., jr.....	Charleston, S. C.....	Car couplings.....	Mar. 20, 1860.
29362	Dahis, Florain, and F. Dærmer.....	Brooklyn, N. Y.....	Bandages, catamantal.....	July 31, 1860.
	Dahis, Robitaille, and Kurth. (See Kurth, Dahis & Robitaille.)			
29363	Dain, John.....	Utica, Ohio.....	Compositions for preservation of timber.....	July 31, 1860.
28972	Dalton, Henry.....	New York, N. Y.....	Trusses.....	July 3, 1860.
27353	Daman, James C.....	Hartford, Ky.....	Stumps, machine for extracting.....	Mar. 6, 1860.
27971	Damarin, Alfred, and George C. Brower.....	New Orleans, La.....	Gas, construction of instrument for lighting.....	April 24, 1860.
	Damon, E., jr., and Alonzo Warren. (See Warren & Damon.)			
28534	Dance, C. P., assignor to self and J. H. and D. E. Dance.....	Columbia, Texas.....	Millstones, hanging.....	May 29, 1860.
29673	Danforth, Clay, Weed & Gray. (See Gray, John, assignor.)	Friendsville, Ill.....	Corn shellers.....	Aug. 21, 1860.
29469	Danforth, George.....			
29469	Daniell, E. C., et al. (See Turner, J., assignor.)			
26897	Daniels, Edward.....	Northampton, Mass.....	Case for indelible ink bottles.....	Aug. 7, 1860.
27088	Daniels, E. Wolcott.....	Springfield, Mass.....	Millstones, machines for picking.....	Jan. 24, 1860.
27112	Daniels, Philander, assignor to Clark Daniels.....	Le Roy, N. Y.....	Tanning.....	Feb. 7, 1860.
29674	Daniels, Thomas.....	Toledo, Ohio.....	Stop cocks.....	Feb. 14, 1860.
	Darling, L. B.....	Providence, R. I.....	Tanks, stone, construction of.....	Aug. 21, 1860.
	Darrow, F. E., and William Webster. (See Seymour, Henry A., assignor.)			
27891	Daser, Louis.....	Washington, D. C.....	Sextant.....	Apr. 17, 1860.
27532	Daskam, Samuel. (See Rogers, Isaac, assignor.)			
30126	Datechy, Florimond.....	Paris, France.....	Engines, steam, apparatus for reworking the waste steam of.	Mar. 20, 1860.
29675	Davey, P.....	Portsmouth, Ohio.....	Bales, cotton, iron ties for.....	Sept. 25, 1860.
27038	David, Jacob.....	New York, N. Y.....	Windows, combined shutter and awning for.....	Aug. 21, 1860.
30564	Davidson, C. R.....	Brooklyn, N. Y.....	Brakes, railroad.....	Feb. 7, 1860.
30565	Davies, James.....	Schuylkill Haven, Pa.....	Locks, canal and river.....	Nov. 6, 1860.
30127	Davis, Sarah N.....	Muskegon, Mich.....	Clothes sprinkler.....	Nov. 6, 1860.
29676	Davis, A. G., and H. S. Frost.....	Watertown, Conn.....	Parasols.....	Sept. 25, 1860.
	Davis, Armeidus.....	Shelbyville, Ind.....	Gun cane.....	Aug. 21, 1860.
27619	Davis, A., et al. (See Pratt, H. T., assignor.)			
26895	Davis, Baldwin, and J. M. Scroggins.....	La Grange, Ga.....	Ploughs.....	Mar. 27, 1860.
	Davis, Caleb S.....	Harrisburgh, Pa.....	Cotton goods, machine for finishing.....	Jan. 24, 1860.

26656	Davis, Francis.....	Lima, Ohio.....	Cultivators.....	Jan. 3, 1860.
28354	Davis, G. W.....	Brooklyn, N. Y.....	Freezers, ice cream.....	May 22, 1860.
28353	Davis, G. W.....	New Orleans, La.....	Counter shaft, arrangement of.....	May 22, 1860.
27620	Davis, James.....	Fayetteville, N. C.....	Sewing machine stitch.....	Mar. 27, 1860.
29064	Davis, James A.....	Portsmouth, Va.....	Boats, ship's, lowering and detaching.....	July 16, 1860.
27208	Davis, Job A.....	New York, N. Y.....	Sewing machines.....	Feb. 21, 1860.
29470	Davis, Job C.....	San Francisco, Cal.....	Mills, quartz.....	Aug. 7, 1860.
27113	Davis, John, and Sturgis Chaddock.....	Boston, Mass.....	Gas retorts.....	Feb. 14, 1860.
30566	Davis, John.....	Elmira, N. Y.....	Carriages, apparatus for detaching horses from.....	Nov. 6, 1860.
29374	Davis, John S.....	Tiffin, Ohio.....	Washing machine.....	Aug. 14, 1860.
29364	Davis, Joseph H.....	Woburn, Mass.....	Warming apparatus.....	July 31, 1860.
26657	Davis, Perry.....	Providence, R. I.....	Boats, construction of.....	Jan. 3, 1860.
30618	Davis, Perry.....	Providence, R. I.....	Boat convertible into a land carriage.....	Nov. 13, 1860.
27433	Davis, S. E., and S. B. Adams. (See Adt, John, assignor.)	Carmel, Me.....	Shoe tips.....	Mar. 13, 1860.
27433	Davis, Wilbur M.....	Boston, Mass.....	Braiding machines.....	Feb. 7, 1860.
27039	Davol, Joseph B., et al. (See Garvey, Benjamin, assignor.)	New York, N. Y.....	Goods, manufacture of shirred.....	Jan. 3, 1860.
26658	Day, Edward B.....	New York, N. Y.....	Elastic cloth, manufacture of.....	May 29, 1860.
28456	Day, Horace H.....	Buffalo, N. Y.....	Churn.....	Jan. 31, 1860.
26970	Day, Horace H.....	New York, N. Y.....	Traps, fly.....	Nov. 13, 1860.
30619	Day, Lester.....	Cleveland, Ohio.....	Water from wells, method of elevating and delivering.....	Aug. 21, 1860.
29677	Day, Samuel S.....	Louisville, Ky.....	Keys.....	May 29, 1860.
28457	Daykin, James.....	Richmond, Ind.....	Washing machine.....	Mar. 20, 1860.
27533	Deally, James.....	Baltimore, Md.....	Saddles.....	Mar. 27, 1860.
27621	Dean, E. P., et al. (See Munger, George, assignor.)	New York, N. Y.....	Locks.....	May 8, 1860.
28162	Dean, S. H., et al. (See Hendry, T. C., assignor.)	Ottawa, Ill.....	Cultivators.....	Oct. 9, 1860.
30302	Dean, William Frank.....	France.....	Paper pulp, manufacture of.....	Aug. 7, 1860.
29471	Derby, Lyman.....	New York, N. Y.....	Fire escape.....	April 24, 1860.
27972	Debolt, Cyrus.....	Canton, Ohio.....	Bedstead.....	Aug. 21, 1860.
29678	De Bruin, Jerome, et al. (See May, William, assignor.)	Philadelphia, Pa.....	Scissors.....	July 24, 1860.
29250	Decamp, John, and John Bailey. (See Bailey & Decamp.)	Derby, Conn.....	Wooden mosaics, method of manufacturing.....	Jan. 24, 1860.
26898	De Campoloro, F.....	New York, N. Y.....	Lanterns.....	Feb. 14, 1860.
27186	De Forest, Thomas B., assignor to self and Wallace & Sons.	New York, N. Y.....	Lanterns.....	Mar. 27, 1860.
27666	De Forest, Thomas B., assignor to self and Wallace & Sons.	New York, N. Y.....	Lanterns.....	April 17, 1860.
27892	De Forest, Thomas B., assignor to self and Wallace & Sons.	New York, N. Y.....	Lanterns.....	Aug. 7, 1860.
29472	De Forest, Thomas B.....	Rochester, N. Y.....	Potato digger.....	July 24, 1860.
29252	De Garino, Daniel.....	New York, N. Y.....	Printing presses.....	April 24, 1860.
27973	Degener, F. O.....	New York, N. Y.....	Lamps.....	Oct. 23, 1860.
30466	De Kervenan, Francis B.....	Boston, Mass.....	Rudders, attachment of.....	Jan. 31, 1860.
26971	Delamater, C. H., et al. (See Page, Edward, assignor.)	Varoslavl, Russia.....	Staves, machines for planing.....	Oct. 2, 1860.
30210	Delano, B. F.....	New York, N. Y.....	Studs, safety.....	Feb. 14, 1860.
27114	De Libatcheff, Jean.....			
	De Masure, Louis.....			
	Deming, James H., and T. H. Jenkins. (See Jackman, Humphrey, assignor.)			

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
29745	Deming & Jenkins. (See Rice, Harvey, assignor.)	New York, N. Y.	Casting iron columns, flasks for.	Aug. 21, 1860.
29253	Demmick, Henry, assignor to self and Peter H. Jackson.	Warsaw, Ill.	Pots, coffee.	July 24, 1860.
29679	Denney, John.	Bath, Me.	Bed bottom slat.	Aug. 21, 1860.
30873	Dennison, A. L.	Waltham, Mass.	Watches, method of regulating.	Dec. 11, 1860.
30467	Denny, Abraham, and Edward Maynard.	Waterford, Ireland.	Singeing pigs, apparatus for.	Oct. 23, 1860.
30804	Denny, Conrad B., et al. (See Crane, S. G., assignor.)	Brockport, N. Y.	Paddle wheel, feathering.	Dec. 4, 1860.
27209	Denton, Sylvester.	Penn Yan, N. Y.	Fences.	Feb. 21, 1860.
30559	Deppen, Eli, and Samuel Mowry. (See Mowry & Deppen.)	Pittsburg, Pa.	Hose, making.	Nov. 6, 1860.
27701	Deshon, Daniel, 2d.	Somerset, Pa.	Churn.	April 3, 1860.
29365	Desnos, Joseph.	Troy, N. Y.	Horseshoe machine.	July 31, 1860.
29741	Desobry, Charles A.	Plaquemine, La.	Furnaces, bagasse.	June 19, 1860.
30050	Despinoy, Augustin J.	Lille, France.	Medicinal extracts, preparation of.	Sept. 18, 1860.
30468	Detheridge, Isaac, jr.	New York, N. Y.	Knife cleaner.	Oct. 23, 1860.
28458	Detray, Truman W.	Montpelier, Vt.	Ferules.	May 29, 1860.
30128	Devlan, P. S.	Elizabethport, N. J.	Journal boxes.	Sept. 25, 1860.
29575	Devlin, John.	Philadelphia, Pa.	Watches, lever attachment for.	Aug. 14, 1860.
29034	Dewees, Farmer. (See McMurtry, John, assignor.) Dewey, E. H. (See Jones, H. A., assignor.)	Brooklyn, N. Y.	Wind mills.	July 3, 1860.
29770	De Witt, Richard, jr. (See Newbury, Frederick D., ass'r.)	Washington, D. C.	Doors open, holding.	Aug. 28, 1860.
30469	De Witzleben, Arthur.	Washington, D. C.	Envelope ruler.	Oct. 23, 1860.
30391	Dexter, Samuel F.	Paris, N. Y.	Boots and shoes.	Oct. 16, 1860.
1205	De Zouche, Isaac.	St. Louis, Mo.	Iron railings.	Feb. 21, 1860.
1233	De Zouche, Isaac.	St. Louis, Mo.	Stoves, parlor.	April 24, 1860.
1280	De Zouche, Isaac, assignor to Bridge, Beach & Company.	St. Louis, Mo.	Stove.	July 3, 1860.
1350	De Zouche, Isaac, assignor to Bridge, Beach & Company.	St. Louis, Mo.	Stove.	Dec. 4, 1860.
26816	Dick, John, assignor to self and S. C. Hills.	New York, N. Y.	Sewing machines.	Jan. 10, 1860.
27781	Dickerman, Elliot.	Richmond, Vt.	Clothes wringer.	April 10, 1860.
30530	Dickerman, Elliot.	Richmond, Vt.	Clothes dryer.	Oct. 30, 1860.
28163	Dickey, Julius C.	Saratoga, N. Y.	Quartz, machinery for crushing.	May 8, 1860.
29771	Dickey, Julius C.	Saratoga, N. Y.	Gold washer and amalgamator.	Aug. 28, 1860.
30670	Dickey, Julius C.	Saratoga, N. Y.	Gold washer and amalgamator.	Nov. 20, 1860.
27210	Dickinson, Edward F., et al. (See Wells, Samuel J., ass'r.)	Breckenridge, Va.	Compass, surveying.	Feb. 21, 1860.
30620	Dickinson, George W., jr.	Painesville, Ohio.	Last holder.	Nov. 13, 1860.
28564	Dickinson, R. (See Jennings, Lewis, assignor.)	Brooklyn, N. Y.	Hat conformatures.	June 5, 1860.

27756	Diedrich, Charles, and William T. Slocum, assignors to J. S. Mason & Company. Dierker, E. H., and William Wassell. (See Sloan, John, assignor.) Dieterich, D. P., and W. E. Bridges. (See Bridges & Dieterich.) Deitz, Andrew. Deitz, Andrew. Dike, Solon. Dike, Solon, et al. (See Watson, John J., assignor.) Dikeman & Son. (See Kirsch, Ernst, assignor.) Dillingham, Moses W. Dillworth, J., et al. (See Hendry, T. C., assignor.) Dimock, Lucius. Dingee, William W. Dinkelspiel & Oppenheimer. (See Wild, Albert, ass'r.) Dinsmore, J. V. Disbrow, Levi. Diss, Leger. Diston, Charles. Diston, Henry. Diston, Thomas S. Disston, Henry. Disston, Thomas S. and Henry. Ditchburn & Knox. (See Knox & Ditchburn.) Dixon, William. Dodge, Henry H. Dodge, John G. Dodge, Nathan S. Dodge, Oren C. Dodge, Thomas H. Dodge, Thomas H. Dodson, Silas. Doerner, F., and Florian Dahis. (See Dahis & Doerner.) Dole, L. A., assignor to self and Albert R. Silver. Dominquez, Celestins. Donalds, David. Donaldson, John. Donaldson, Robert B. Donnell, Samuel L. Donovan, Cornelius. { Doolittle, Charles, and Alfred Carson. Doolittle, I. H. Doolittle, Zina. Dopp, H. W., and William S. Mead. (See Mead & Dopp.) Dopp, H. W., and William S. Mead. Dopp, H. William. Dopp, H. William. Dopp, H. William, assignor to J. B. White. Dopp, H. William. Dorsey, D. B., and E. Mathers.	Philadelphia, Pa.	Metal caps for boxes, machine for making.	April 3, 1860.
30393	New York, N. Y.	Leather, tanned, treatment of.	Oct. 16, 1860.	
30392	New York, N. Y.	Tanning.	Oct. 16, 1860.	
30394	Columbia, S. C.	Press, cotton.	Oct. 16, 1860.	
30568	Charlestown, Mass.	Lamps, vapor.	Nov. 6, 1860.	
29146	Hebron, Conn.	Silk in the hank, machines for stretching.	July 17, 1860.	
29254	York, Pa.	Thrashing machines.	July 24, 1860.	
27702	Auburn, Me.	Boots and shoes, metallic heels for.	April 3, 1860.	
29366	Oswego, N. Y.	Vernin, apparatus for destroying.	July 31, 1860.	
26659	Oriskany, N. Y.	Locks.	Jan. 3, 1860.	
28973	Philadelphia, Pa.	Potato parer.	July 3, 1860.	
27354	Philadelphia, Pa.	Saws, hand, method of securing handles on.	Mar. 6, 1860.	
28565	Philadelphia, Pa.	Saws, cross cut, machine for making tabs for.	June 5, 1860.	
29680	Philadelphia, Pa.	Saw blades, machine for grinding.	Aug. 21, 1860.	
29722	Philadelphia, Pa.	Saw teeth, machine for setting.	Aug. 28, 1860.	
28839	Chicago, Ill.	Hay, loading.	June 26, 1860.	
30470	Georgetown, D. C.	Gas burners.	Oct. 23, 1860.	
27277	St. Louis, Mo.	Tent frame.	Feb. 28, 1860.	
27278	Indianapolis, Ind.	Horse-powers.	Feb. 28, 1860.	
30671	Brooklyn, N. Y.	Table, adjustable.	Nov. 20, 1860.	
26972	Washington, D. C.	Reaping and mowing machine, combined.	Jan. 31, 1860.	
29147	Washington, D. C.	Cultivators, cotton.	July 17, 1860.	
30131	San Francisco, Cal.	Cleaning rice.	Sept. 25, 1860.	
26822	Salem, Ohio.	Tenons, round, tool for cutting.	Jan. 10, 1860.	
28974	San Francisco, Cal.	Quartz crushing apparatus.	July 3, 1860.	
27893	New York, N. Y.	Veneers, machine for cutting.	April 17, 1860.	
26893	Rockford, Ill.	Separators for hominy mills.	Jan. 24, 1860.	
30531	Washington, D. C.	Spring, door.	Oct. 30, 1860.	
29955	South Carroll, Tenn.	Grading instrument.	Sept. 11, 1860.	
29473	East Abington, Mass.	Engines, rotary.	Aug. 7, 1860.	
30303	Oswego, N. Y.	Fruit case.	Oct. 9, 1860.	
27622	New York, N. Y.	Wrench pipe.	Mar. 27, 1860.	
29065	Ansonia, Conn. Perry, Ga.	Planters, cotton seed.	July 10, 1860.	
27211	Buffalo, N. Y.	Lamps, burners for vapor.	Feb. 21, 1860.	
27279	Buffalo, N. Y.	Sewing machines.	Feb. 28, 1860.	
27355	Buffalo, N. Y.	Engines, steam.	Mar. 6, 1860.	
30444	Buffalo, N. Y.	Lamps.	Oct. 16, 1860.	
30621	Buffalo, N. Y.	Lamps, vapor.	Nov. 13, 1860.	
30211	Fairmount, Va.	Type setting.	Oct. 2, 1860.	

28743	Duff, James B., and T. W. Keating	New York, N. Y.	Belts, pulley, machine for measuring the strain on	June 19, 1860.
29576	Dunbar, Henry D.	Memphis, Tenn.	Engines, steam, pistons for	Aug. 14, 1860.
29956	Dunbar, John H.	Plymouth, Conn.	Saw clamp	Sep. 11, 1860.
28356	Dunham, Carolus	Batavia, N. Y.	Potato diggers	May 22, 1860.
30622	Dunham, David F.	Brook, Ind.	Spelling boxes	Nov. 13, 1860.
30961	Dunham, John G.	Raritan, N. J.	Mowing machines	Dec. 18, 1860.
27894	Dunham, Stephen P., and A. Whipple	Killbourne, Ohio	Churn	Apr. 17, 1860.
28036	Dunham, Theodore R., assignor to Thomas B. Peddle and John Morrison	Newark, N. J.	Bags traveling	Apr. 24, 1860.
27115	Dunklee, B. Wells	Boston, Mass.	Cooking utensils	Feb. 14, 1860.
27436	Dunklee, B. Wells	Boston, Mass.	Ranges	Mar. 13, 1860.
29474	Dunlop, Charles Tenant	Glasgow, Scotland	Oxide of manganese, manufacture of	Aug. 7, 1860.
27041	Dunning, R. H.	North San Juan, Cal.	Gold separator	Feb. 7, 1860.
26975	Dunzack, Daniel N.	Salem, Mass.	Cocks, stop, method of operating	Jan. 31, 1860.
26848	Dunzack, Daniel N.	Salem, Mass.	Boxes, chisel for opening	June 26, 1860.
29149	Durant, Charles W. (See Seely, Samuel J., ass'r.) Durant, C. W. (See Seely, Samuel J.) Durgin, C. A., et al. (See Lapham, A., ass'r.) Durham, Booth & Boynton. (See Boynton, L. W., ass'r.) Durham, J. W.	Durhamville, Tenn.	Engine for employing steam, or any aeriform or gaseous body under pressure, to obtain motive power.	July 17, 1860.
30913	Durham, John	Cherry Grove, Ohio	Boot jack	Dec. 18, 1860.
26713	Durkee, William E., assignor to self, A. S. Williams, and Joseph H. Hopkins	Port Edward, N. Y.	Elevator, hay	June 12, 1860.
29957	Duryea, Wright	New York, N. Y.	Joining boxes, device for	Sep. 11, 1860.
28165	Dustin, Selah	Detroit, Mich.	Valves for steam boilers, alarm	May 8, 1860.
29847	Dutcher, Davis	Blue Grass, Iowa	Planters, corn	June 26, 1860.
26896	Dutcher, Jacob	Gibson, Pa.	Brake wagon, self-acting	Jan. 24, 1860.
29251	Dutcher, Jacob	Gibson, Pa.	Brake, sleigh, self-acting	July 24, 1860.
26976	Dutton, Joseph L., jr.	Cherry Lake, Fla.	Ploughs	Jan. 31, 1860.
27623	Dutton, Joseph L., sen	Philadelphia, Pa.	Hoisting and weighing machine	Mar. 27, 1860.
30304	Dye, A. M.	Clinton, Ill.	Bedsteads, folding	Oct. 9, 1860.
27534	Dyer, Caleb M., and D. M. Cummings	Enfield, N. H.	Shingle machine	Mar. 20, 1860.
29682	Dyer, Elbridge G.	Hamilton, Ohio	Saw mills, feed motion for	Aug. 21, 1860.
30623	Dyer, Elbridge G.	Hamilton, Ohio	Saw mills, feed motion for head blocks of	Nov. 13, 1860.
26976	Dykeman, John	Greenbush, N. Y.	Locomotive engines, variable exhaust for	July 3, 1860.
27782	Eager, William F., et al. (See Batchelder, Hazen J.) Eagle Screw Company. (See Sloan, Thomas J., ass'r.)	Kalamazoo, Mich.	Mortising tool	Apr. 10, 1860.
27895	Eames, Lovett	Kalamazoo, Mich.	Mortising machine	Apr. 17, 1860.
28262	Eames, Lovett	Kalamazoo, Mich.	Weighing machines, automatic, grain	May 15, 1860.
29256	Earheart, Thomas	Donaldson, Tenn.	Grain separator	July 24, 1860.
27407	Earle, T., and William T. Nicholson. (See Nicholson & Earle)	Indianapolis	Rakes, horse hay	Mar. 6, 1860.
27707	Eastman, C. J. F. (See Herrick, Hiram H., ass'r.)	New York, N. Y.	Steel, manufacture of	Apr. 3, 1860.
28744	Eaton, A. K.	New York, N. Y.	India rubber, treatment of	June 19, 1860.
30567	Eaton, A. K.	New York, N. Y.	Amalgamator, gold	Nov. 6, 1860.
27706	Eaton, Asahel K.	King county, N. Y.	Caoutchouc, vulcanizing	Apr. 3, 1860.
28459	Eaton, Asahel K.	Brooklyn, N. Y.	Safes, fire-proof, rendering	May 29, 1860.
28067	Eaton, George	Boston, Mass.	Rails for street railways	May 1, 1860.

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
29255	Ebbitt, William.....	New York, N. Y.....	Railroads, city, switch plates for.....	July 24, 1860.
27535	Eberly, A., and F. Seidle. (See Seidle & Eberly.)	Lancaster, Pa.....	Shutter operator.....	May 20, 1860.
26574	Ebner, John.....	Dayton, Ohio.....	Pulmonometers.....	Jan. 10, 1860.
	Eckert, Augustus.....			
	Eddy & Shavor. (See Stanley, Henry, ass'r.)			
26944	Edelman, G. W., jr. (See Edelman, Isaac, ass'r.)	Philadelphia, Pa.....	Closets, water.....	Jan. 24, 1860.
28661	Edelman, Isaac.....	Jersey City, N. J.....	Torch for night processions.....	June 12, 1860.
26977	Edney, James M., et al. (See Fletcher, E. F. M.)	Boston, Mass.....	Leather, machines for cutting and splitting.....	Jan. 31, 1860.
29577	Edson, Jacob.....	Boston, Mass.....	Street sweeping machine.....	Aug. 14, 1860.
30395	Edson, Jacob.....	New Orleans, La.....	Carriage wheels, metallic hubs for.....	Oct. 16, 1860.
	Edson, N. T.....			
	Edson, William. (See Shedd, J. Herbert.)			
30805	Edwards, C. H.....	Vergennes, Vt.....	Tuyere.....	Dec. 4, 1860.
26899	Edwards, Elisha F.....	Leroy, Ill.....	Wind mills.....	Jan. 24, 1860.
27020	Edwards, George, assignor to self and George M. Rice.	Worcester, Mass.....	Engines, steam, variable exhaust pipe for.....	Jan. 31, 1860.
26978	Edwards, Matthew.....	Cambridge, Mass.....	Process for coloring the surface of metal.....	Jan. 31, 1860.
28068	{ Edwards, Nelson, and.....	Chittendon county, Vt.....		
	{ Edward G. Day.....	New York, N. Y.....	Straw cutters.....	May 1, 1860.
27783	Ellis, Seth W.....	Mansfield, Ohio.....	Sugar juices, apparatus for evaporating.....	April 10, 1860.
29866	Efner, G. W., and Samuel A. Sperry.....	Ann Arbor, Mich.....	Carriages.....	Sept. 4, 1860.
	Egglestone, Thomas G., et al. (See Robinson, Charles L., assignor.)			
	Egnor, Joel. (See Van Steenburgh & Egnor.)			
30624	Ehlin, E.....	Boston, Mass.....	Alarms, fire.....	Nov. 13, 1860.
28566	Ehrman, Henry, Joseph H. and Henry H.....	Anville, Penn.....	Washing machines.....	June 5, 1860.
30213	Eichberg, Joseph T.....	New York, N. Y.....	Parasol and fan.....	Oct. 2, 1860.
27116	Eidlitz, Leopold.....	New York, N. Y.....	Photographic bank notes.....	Feb. 14, 1860.
29066	Elder F.....	Winnsboro, S. C.....	Mattress and bed.....	July 10, 1860.
29958	Elder, Matthew.....	Lansing, Mich.....	Brick moulds.....	Sept. 11, 1860.
	Elderhorst, W., et al. (See Twing, Wood & Elderhorst.)			
28357	Eldred, David.....	Monmouth, Ill.....	Seeding machines.....	May 23, 1860.
30129	Eldred, David.....	Monmouth, Ill.....	Seeding machines.....	Sept. 25, 1860.
30672	Eldridge, David.....	Philadelphia, Pa.....	Saws, circular, method of hanging.....	Nov. 20, 1860.
28128	Ellicott, James P., assignor to Phelan & Collender.....	Washington, D. C.....	Billiard table pocket irons.....	May 1, 1860.
28435	Ellicott, James P., assignor to Phelan & Collender.....	Washington, D. C.....	Billiard tables, chalk holder for.....	May 22, 1860.
	Elliot, Gustavus, et al. (See Fowler, De Grasse and Thaddeus, assignors.)			
28460	Elliot, William H.....	Plattsburg, N. Y.....	Fire-arm, repeating.....	May 29, 1860.
28461	Elliot, William H.....	Plattsburg, N. Y.....	Fire-arm, revolving.....	May 29, 1860.
29959	Elliot, E. G.....	Elkhorn, Wis.....	Watches.....	Sept. 11, 1860.
27262	Elliot, George, and George F.....	Manchester, Conn.....	Lock.....	Feb. 21, 1860.
26660	Elliot, H. W., and George S. Conkling.....	Goshen, N. Y.....	Railroad switches.....	Jan. 3, 1860.
	Elliot, John C., et al. (See McNair & Elliott.)			
27117	Elliott, Josiah S.....	West Needham, Mass.....	Brick presses.....	Feb. 14, 1860.

27974	Ellis, C.R. (See Brown & Ellis)	Waterbury, Conn.	Match case, portable.	April 24, 1860.
30570	Ellis, Darwin, and Phillander Hine.	New Britain, Conn.	Washing machine.	Nov. 6, 1860.
27896	Ellis, Sylvander.	Washington, D.C.	Casting fire plugs.	April 17, 1860.
	Ellis, William M. and Jonas B.			
	Ellsworth, C.H., and D.W. Church. (See Church & Ellis-worth.)			
28346	Elmer, D.F.	Haydenville, Mass.	Watch key and guard bar.	June 26, 1860.
30625	Elward, John H.	Ottawa, Ill.	Ploughs, mole.	Nov. 13, 1860.
	Ely, A.B. (See Johnson, A.F., assignor.)			
27536	Embree, Pearson.	West Chester, Pa.	Churn.	Mar. 20, 1860.
27280	Emerson, Edward P.	Blairsville, Pa.	Paint, composition for.	Feb. 28, 1860.
27537	Emerson, James E.	San Francisco, Cal.	Saws.	Mar. 20, 1860.
27784	Emerson, James E.	San Francisco, Cal.	Axe handles, fastening for.	April 10, 1860.
27785	Emerson, James E.	San Francisco, Cal.	Lubricating carriage axles.	April 10, 1860.
	Emerson, R., N. Johnson and N.C. Travis. (See Travis, Johnson & Emerson.)			
29960	Emery, A.H.	New York, N.Y.	Press, anti-friction.	Sept. 11, 1860.
29475	Emery, H.C., and D.B. Neal. (See Neal & Emery.)	Lincoln, Ohio.	Engine, rotary.	Aug. 7, 1860.
29867	Emery, H.C.	Albany, N.Y.	Gins, cotton.	Sept. 4, 1860.
	Emery, Horace L. (See Thompson, C.H., assignor.)			
29067	Emmert, Ezra.	Franklin Grove, Ill.	Seeding machines.	July 10, 1860.
29368	Emmert, Ezra.	Franklin Grove, Ill.	Cultivators.	July 31, 1860.
27538	Emmett, William.	Galveston, Texas.	Marble, &c., machines for polishing.	Mar. 20, 1860.
30912	Ende, John.	Buffalo, N.Y.	Collars, horse.	Dec. 18, 1860.
26661	Ender, James R.	Trenton, La.	Inkstands.	Jan. 3, 1860.
27897	Ender, James R.	Trenton, La.	Hats.	April 17, 1860.
29476	Ender, James R.	Trenton, La.	Washstand, fountain.	Aug. 7, 1860.
27540	Englehard, George A.	New York, N.Y.	Varnishes.	Mar. 20, 1860.
28263	Engler, Louis, and Ernst Frederick Krauss.	Paris, France.	Electrodes, insulator for.	May 15, 1860.
27949	English, Luzon C., assignor to self and G.M. Angier.	Canton, N.Y.	Stump extractor.	April 17, 1860.
28977	Enholm, A.H.	St. Louis, Mo.	Alarm, burglar's.	July 3, 1860.
	Enos, D.C., et al. (See Lubach, William H., assignor.)			
30306	Ericsson, John.	New York, N.Y.	Air engines.	Oct. 9, 1860.
29150	Ernst, Adam, and C. Shepard.	Milwaukee, Wis.	Furnaces, hot air.	July 17, 1860.
31000	Essex, Henry, assignor to Thomas H. Bates.	Haverstraw, N.Y.	Sewing needles.	Dec. 18, 1860.
28662	Estes, Philip.	Leavenworth, Kan.	Quartz crushers.	June 12, 1860.
30725	Estes, Truman.	North Bennington, Vt.	Bobbins, friction brakes for.	Nov. 27, 1860.
	Eude, E., and P. Marcelin. (See Marcelin & Eude.)			
27541	Eustice, T., and J. Jordan, jr. (See Jordan & Eustice.)	Mount Vernon, Ohio.	Furnaces.	Mar. 20, 1860.
30872	Evans, Benjamin D.	Malden, Mass.	Skirts, clasp for hooped.	Dec. 11, 1860.
	Evans, George P. (See Chichester, Lewis S., assignor.)			
30532	Evans, H.G.	Baltimore, Md.	Sheet metal, machine for bending.	Oct. 30, 1860.
26755	Evans, Henry J.	Philadelphia, Pa.	Inkstand.	Jan. 10, 1860.
28264	Evans, Howell.	Forsyth, Ga.	Shovel and tongs, combination of.	May 15, 1860.
28462	Evans, J.W.	Forsyth, Ga.	Churns.	May 29, 1860.
29683	Evans, J.W.	New York, N.Y.	Bales, cotton, fastening for.	Aug. 21, 1860.
30054	Evans, James W.	Morgantown, Va.	Rifle balls, moulds for.	Sept. 18, 1860.
30307	Evans, Lewis.	Morgantown, Va.	Ordinance, breech-loading.	Oct. 9, 1860.
30533	Evans, Lewis.	Morgantown, Va.	Casting packing around cannon balls, flask for.	Oct. 30, 1860.
27786	Evans, Orinrod C.	New York, N.Y.	Engines, steam.	April 10, 1860.
30806	Evans, Thomas.	Watkins, N.Y.	Wiring tin cans.	Dec. 4, 1860.

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
29125	Evarts, Harry H., assignor to self and Phineas E. Merriew	Chicago, Ill.	Sawing staves, machines for.	July 10, 1860.
29257	Everson, Ephraim	Haverhill, Mass.	Pegging jacks.	July 24, 1860.
29166	Ewing, Martin B., et al. (See Rowe, James, assignor.)	Nicollet county, Minn.	Chair, rocking, convertible into a cradle.	May 8, 1860.
30726	Ewing, Richard H.	Clives, Ohio.	Ploughs, hillside.	Nov. 27, 1860.
27975	Eylar, Joseph F.	Scott, Ohio.	Cultivators.	April 24, 1860.
30673	Eynon, David, assignor to Charles E. Smith	Philadelphia, Pa.	Railroad chairs, making.	Nov. 20, 1860.
1191	Ezekiel, N.	Richmond, Va.	Trade mark (Design)	Jan. 24, 1860.
30914	Fairchild, George N., and Thomas Joyce	New York, N. Y.	Callimeters.	Dec. 18, 1860.
28567	Fairchild, H. C.	Brooklyn, Pa.	Planters, seed.	June 5, 1860.
29684	Fairfax, Charles, jr.	Cincinnati, Ohio.	Belts, coupling for.	Aug. 21, 1860.
30807	Falke, Oscar, and A. C. Richard.	College Point, N. Y.	Caoutchouc, vulcanizing.	Dec. 4, 1860.
26900	Farley, Henry W.	Newtown, Conn.	Gauges, pressure.	Jan. 24, 1860.
29685	Farmer, George	Hannibal, Mo.	Harvesters.	Aug. 21, 1860.
27976	Farmer, Henry W.	Oceola, Ill.	Window blind slat machine.	April 24, 1860.
27787	Farnam, John M.	Poultney, Vt.	Knife sharpener and cleaner.	April 10, 1860.
30055	Farnan, James	Hartford, Conn.	Faucet.	Sept. 18, 1860.
27708	Farnham, Daniel P.	Cleveland, Ohio.	Well bucket.	April 3, 1860.
	Farnham & Priston. (See Priston & Farnham.)	Johnstown Centre, Wis.		
27118	Farrar, E. P., and J. N. Farrer.	New York, N. Y.	Water metres.	Feb. 14, 1860.
30674	Farrington, De Witt C.	Pepperell, Mass.	Stoves, cooking.	Nov. 20, 1860.
26945	Farrington, George H., assignor to self and Geo. W. Read.	Lowell, Mass.	Pots, coffee.	Jan. 24, 1860.
29868	Fasig, Daniel.	Xenia, Ohio.	Straw cutters, feeder for.	Sept. 4, 1860.
27437	Fasig, John.	Rowsbury, Ohio.	Pruning implements.	Mar. 13, 1860.
29215	Fassanan, Henry, et al. (See Hughes, Charles, assignor.)	Congress, Ohio.	Smut machines.	July 17, 1860.
30132	Favinger, Samuel, assignor to self and Absalom Barned.	Philadelphia, Pa.	Rakes, hay.	Sept. 25, 1860.
26756	Fay, Cyrus J.	Hannumton, N. J.	Stoves.	Jan. 10, 1860.
27042	Fay, H. B.	New York, N. Y.	Paddle wheel.	Feb. 7, 1860.
27119	Fay, Henry B.	New York, N. Y.	Blind operator.	Feb. 14, 1860.
27788	Fayman, Lucius, and William Mason.	Warren, Mass.	Hinges, butt.	April 10, 1860.
	Fayman, George H.	Washington, D. C.		
	Feenders, H., and J. Collmann. (See Collmann & Feenders.)	Liverpool, England.	Resin, manufacture of.	Mar. 27, 1860.
27624	Fehrman, Diederich.	Lancaster, Pa.	Engines, steam, variable cut-off for.	June 5, 1860.
28632	Fell, T. M., and J. N. Wyckoff. (See Wyckoff & Fell.)	Lancaster, Pa.	Mill stones, balancing.	Sept. 4, 1860.
29869	Fellenbaum, David, assignor to self and Nathaniel Baker.	Bloomfield, Ind.	Water wheel.	July 24, 1860.
29261	Fellenbaum, D.	Salem, Mass.	Type, machine for setting.	May 29, 1860.
28463	Fellows, Henry.	Michigan city, Ind.	Hay and straw cutters.	Sept. 18, 1860.
30053	Felt, Charles W.	Talmadge, Ohio.	Gate.	Aug. 28, 1860.
29774	Felthousen, Jacob D.			
	Fenn, D. E.			
	Fenwick, R. W. (See Sherman & Fenwick.)			

30133	Fenwick, Robert W.	Washington, D. C.	Bales, cotton, bands for.	Sept. 25, 1860.
26979	Ferber, Andrew	Elizabeth, N. J.	Fastener, shutter	Jan. 31, 1860.
29151	Ferguson, Charles J.	New York, N. Y.	Clothes frame	July 17, 1860.
27625	Ferguson, Levi	Lowell, Mass.	Steam trap	Mar. 27, 1860.
29961	Ferguson, M. H.	Sunfish, Ohio	Mills, feeding grain to	Sept. 11, 1860.
27438	Ferguson, William and David	New York, N. Y.	Moulds for casting blackwashing	Mar. 13, 1860.
30396	Ferris, E. W.	Macon, Miss.	Medicines, astrigent	Oct. 16, 1860.
29259	Ferry, Daniel J.	Philadelphia, Pa.	Wires, friction, machine for making	July 24, 1860.
27757	Fetter, George, assignor to self and Jones & Cowley	Philadelphia, Pa.	Harvesters, cutting apparatus for	April 3, 1860.
30518	Fetter, George, assignor to S. Pancoast	Philadelphia, Pa.	Sewing machines	Oct. 23, 1860.
29870	Fickett, H. E.	Glenn's Falls, N. Y.	Clothes dryer	Sept. 4, 1860.
29775	Fidler, Frederick	Batavia, N. Y.	Stalk and root cutters	Aug. 28, 1860.
30874	Field, George B.	St. Louis, Mo.	Coffins, glass	Dec. 11, 1860.
29153	Fields, J. J., et al. (See Kingsley, William, assignor)	Winchester, Ohio	Shovels	July 17, 1860.
30397	Filley, Giles F. (See Olmstead, Kingsley R.)	Meriden, Conn.	Fasteners, window blind	Oct. 16, 1860.
29776	Finger, J. F.	Marion, S. C.	Table, circular	Aug. 28, 1860.
27789	Finlay, William	Schoolcraft, Mich.	Harrows, seeding	April 10, 1860.
29035	First, John, assignor to self and James Frost	New York, N. Y.	Sewing machines	July 3, 1860.
29068	Fischer, John U.	New York, N. Y.	Pianofortes	July 10, 1860.
28568	Fish, James M.	Buffalo, N. Y.	Weighing and bagging grain, machine for	June 5, 1860.
26980	Fisher, Chandler	Middleton, Mass.	Curtain fixture	Jan. 31, 1860.
29154	Fisher, C. J.	Waukon, Iowa	Collars, horse	July 17, 1860.
30472	Fisher, J. H.	Placerville, Cal.	Car seats and couches, railroad	Oct. 23, 1860.
29155	Fisher, Joseph H.	Placerville, Cal.	Picks and other tools, fastening the handles to	July 17, 1860.
28845	Fisher, J. P.	Rochester, N. Y.	Bridge, iron	June 26, 1860.
30915	Fisher, J. P.	Rochester, N. Y.	Carriage wheels	Dec. 18, 1860.
27790	Fisher, R. H.	Beverly, N. J.	Cutlery, securing handles of	April 10, 1860.
30727	Fisher, Samuel	West Windsor, N. J.	Ploughs	Nov. 27, 1860.
28844	Fisher, Shalters & Co. (See Ray & Shalters, assignors.)	Charlestown, Mass.	Bolt for store shutters	June 26, 1860.
29069	Fisk, Samuel, et al. (See Gibson, A. J., assignor.)	Seneca Falls, N. Y.	Filters	July 10, 1860.
26841	Fitch, John	New York, N. Y.	Churn	Jan. 17, 1860.
28843	Fitch, Josiah P.	Morristown, Ind.	Cultivators	June 26, 1860.
30875	Fitch, O. F.	Cavendish, Vt.	Carding engines	Dec. 11, 1860.
29369	Flitton, James	Worcester, Mass.	Planing machine	July 31, 1860.
28235	Flitts, Benajah	Philadelphia, Pa.	Pens, ink reservoir for	May 8, 1860.
28358	Flitts, R. B., assignor to self and W. L. Gilroy	Boston, Mass.	Pegging machine jack	May 22, 1860.
29262	Fitzgerald, Walter	New Orleans, La.	Chimney cap	July 24, 1860.
29649	Fitzpatrick, Thomas I.	Boston, Mass.	Leather splitting machine	Aug. 14, 1860.
30057	Flanders, J. F., assignor to self and E. G. Allen	Cleveland, Ohio	Propulsion, marine	Sept. 18, 1860.
27408	Flanders, L. B.	Cleveland, Ohio	Bee hives	Mar. 6, 1860.
29686	Flanders, W. A., assignor to self and T. W. Boyce	Jackson, Miss.	Telegraph instruments	Aug. 21, 1860.
29263	Flanery, David	Brooklyn, N. Y.	Faucets	July 24, 1860.
29962	Flattery, James	Ypsilanti, Mich.	Planes, moulding	Sept. 11, 1860.
27950	Fleming, Charles	Racine, Wis.	Heat radiators	April 17, 1860.
27951	Fletcher, D. G., assignor to self and James Yates	Gorgia Plains, Vt.	Wind mills	April 17, 1860.
30916	Fletcher, E. F. M., assignor to self and James M. Edney	Gorgia Plains, Vt.	Water wheels	Dec. 18, 1860.
26662	Fletcher, E. F. M.	Bloomfield, Me.	Corn shellers	Jan. 3, 1860.
27120	Flickinger, Peter	Hanover, Pa.	Harvesters	Feb. 14, 1860.

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
27356	Flinn, Darwin P., and Richmond S. Hayes.	Le Roy, N. Y.	Harvesters, corn and cane.	Mar. 6, 1860.
28167	Flippen, Charles W.	Laurel Grove, Va.	Presses, hydraulic.	May 8, 1860.
29264	Flowers, William, and Z. S. Patton.	Bangor, Me.	Boat lowering apparatus.	July 24, 1860.
29777	Floyd, F. G. and E. A.	Macomb, Ill.	Planters, corn.	Aug. 28, 1860.
30398	Floyd, James R.	New York, N. Y.	Safes, burglar-proof, making.	Oct. 16, 1860.
30106	Focer, John, assignor to Whitney Brothers.	Glassborough, N. J.	Bottles, tools for forming screws in the necks of.	Sept. 18, 1860.
29871	Fogg, Luther.	Boston, Mass.	Skates.	Sept. 4, 1860.
26665	Folsom, Arthur.	Boston, Mass.	Tunnels, tubular submarine.	Jan. 3, 1860.
27043	Folsom, J. F., and E. T. Green. (See Green, E. T., ass'r.)	New York, N. Y.	Lock for umbrella stands.	Feb. 7, 1860.
28569	Foot, Alfred M.	Springfield, Ill.	Drills, rock.	June 5, 1860.
26265	Foot, E. L.	Saratoga Springs, N. Y.	Boots and shoes, filling for the soles of.	May 15, 1860.
28842	Foot, Eunice N.	New York, N. Y.	Watch chain hook.	June 26, 1860.
26817	Foot, E. N.	Fredericktown, Ohio.	Watch key and calendar, combined.	Jan. 10, 1860.
29156	Foot, Henry C., assignor to self and William C. Kilgore.	McGaheysville, Va.	Calendar, pocket.	July 17, 1860.
	Foot, Henry C., and W. T. McGahey. (See McGahey & Foot.)			
29258	Forbes, John G., and R. Squires. (See Fisk, A. D., ass'r.)	London, Ohio.	Ditching ploughs, capstans for.	July 24, 1860.
27212	Forbis, Elias.	Buffalo, N. Y.	Ventilation of railroad cars, apparatus for the.	Feb. 21, 1860.
27213	Forbush, Eliakim B.	Keypoint, N. J.	Oyster dredges.	Feb. 21, 1860.
30134	Force, William L.	New York, N. Y.	Hatchways, apparatus for opening and closing.	Sept. 25, 1860.
	Ford, C. B., et al. (See Butler, Lester, assignor.)			
	Ford, Elmer C.			
	Ford, E., and J. Harvey. (See Harvey & Ford.)			
	Ford, Frederick C. (See Black & Ford.)			
	Foreman, Eli, and P. Gevin. (See Gevin & Foreman.)			
30214	Forman, Israel.	Grafton, Va.	Culinary apparatus.	Oct. 2, 1860.
26981	Forrest, John M.	Norfolk, Va.	Carriage springs.	Jan. 31, 1860.
30962	Forrey, Joseph D.	Lewistown, Pa.	Hulling clover, machines for.	Dec. 18, 1860.
27874	Foster, George P.	Providence, R. I.	Fire-arms, breech-loading.	Apr. 10, 1860.
27791	Foster, George P.	Providence, R. I.	Cartridge cases.	Apr. 10, 1860.
1276	Foster, Henry C.	Worcester, Mass.	Spoon handles.	July 3, 1860.
30399	Foster, Joseph.	Richmond, Va.	Gas regulators.	Oct. 16, 1860.
29477	Foster, Orlando.	Kenosha, Wis.	Tire, &c., machine for upsetting.	Aug. 7, 1860.
30215	Foster, Thomas N.	Watertown, N. Y.	Harvesters.	Oct. 2, 1860.
26874	Fowler, De Grasse and Thaddeus, assignors to selves, Samuel Maltby, and Gustavus R. Elliot.	North Branford, Conn.	Pins, making coated iron.	Jan. 17, 1860.
	Fowler, De Grasse B. (See Simonton, T. C., assignor.)			
27899	Fowler, F. F.	Crane Township, Ohio.	Elevators for hay, &c.	Apr. 17, 1860.
29578	Fowler, James S.	Peoria, Ill.	Planters, cotton.	Aug. 14, 1860.
29069	Fowler, Samuel T.	Brooklyn, N. Y.	Walls, concrete, construction of.	May 1, 1860.
29431	Fowler, Thaddeus and De Grasse, assignors to United States Pin Company.	Northford, Conn.	Pins, machine for manufacture of.	July 31, 1860.
	Fox, Charles R., et al. (See Nicholson, David, assignor.)			
	Fox, D. H., and G. J. Willson. (See Willson & Fox.)			

27044	Fox, Jacob	Philadelphia, Pa.	Chuck, drill	Feb. 7, 1860.
27977	Fox, Myron	Stamford, Conn.	Lightning rods, method of insulating and supporting.	Apr. 24, 1860.
27978	Fox, Samuel M.	New York, N. Y.	Railroads, city, track for.	Apr. 24, 1860.
30135	Foye, Henry H.	Ottawa, Ill.	Harvesters	Sept. 25, 1860.
	France, Thomas, et al. (See Williamson, Aaron, ass'r.)			
26842	Frank, F. (See Mills, Samuel, assignor.)			
30137	Frank, Stuber & Tobie. (See Stuber, Frank & Tobie.)			
	Franklin, William	New Haven, Conn.	Pantaloons	Jan. 17, 1860.
	Franz, Henry	Philadelphia, Pa.	Malt kilns, floors for	Sept. 25, 1860.
	Fraser, D. R., and Hiram H. Scoville. (See Scoville & Fraser.)			
	Fraser, D. R., et al. (See Gates, Philctus, assignor.)			
	Fraser, D. R., et al. (See Gates, P. W. and D. R.)			
30136	Fraser, Edwin J.	Kansas City, Mo.	Ploughs	Sept. 25, 1860.
28266	Fraser, J.	Rochester, N. Y.	Clothes frame	May 15, 1860.
27439	Frazee, Lawrence F.	New Brunswick, N. J.	Sifters, ash	Mar. 13, 1860.
28663	Frazier, Samuel	Galena, Ill.	Distillation of oils from resin	June 12, 1860.
	Frear, James M. (See Steger, Joseph.)			
29963	Freeman, George	New York, N. Y.	Screws, wood	Sept. 11, 1860.
27121	Freeman, James M.	Bellville, N. Y.	Carriage tops	Feb. 14, 1860.
	Frees, Hellar & Whitaker. (See Whitaker, Isaac N., ass'r.)			
	French, D. S., and J. Hinman. (See Hinman & French.)			
	French, Elish			
29370	French, George E. B.	Braintree, Mass.	Horses from fire, apparatus for rescuing	July 31, 1860.
26663	French, J. M. & Co., et al. (See Mattason, William L. R., assignor.)	Washington, D. C.	Medical topical applications, apparatus for	Jan. 3, 1860.
	French, J. S., and L. E. Cushman. (See Cushman & French.)			
	French, Lewis H.	Philadelphia, Pa.	Register, car	Aug. 28, 1860.
29778	French, Moses	Leesville, Ind.	Millstone bush	Apr. 3, 1860.
28664	Frew, George E.	Brooklyn, N. Y.	Pen and pencil case	June 12, 1860.
29432	Frew, George E., assignor to Wm. and John Richardson	Brooklyn, N. Y.	Pen and pencil case	July 31, 1860.
30571	Frick, Jacob	Philadelphia, Pa.	Fastener, shutter	Nov. 6, 1860.
28070	Fricke, Charles	Mobile, Ala.	Cement	May 1, 1860.
28464	Fricke, Charles	Mobile, Ala.	Cement	May 29, 1860.
29152	Friedrich, August, and Conrad Walter	New York, N. Y.	Tobacco boxes	July 17, 1860.
27898	Frink, Isaac P.	Newark, N. J.	Gas lights, reflector for	Apr. 17, 1860.
29070	Frisbie, Russel	Middletown, Conn.	Bench hook	July 10, 1860.
28071	Fritz, Philip C.	Barrytown, N. Y.	Grain cleaners	May 1, 1860.
30138	Frost, George	Brooklyn, N. Y.	Valves, cut-off, for steam engines	Sept. 25, 1860.
	Frost, H. S., and A. G. Davis. (See Davis & Frost.)			
	Frost, James, et al. (See First, John, assignor.)			
26733	{ Fry, Thomas, and Charles A. Seely, assignors to Charles A. Seely, assignor to W. Campbell.	Brooklyn, N. Y. New York, N. Y.	Pictures on glass, mode of backing up	Jan. 3, 1860.
27792	Fry, Thomas	Brooklyn, N. Y.	Chair castor	Apr. 10, 1860.
28267	Fry, Thomas	Brooklyn, N. Y.	Window sash, hanging	May 15, 1860.
	Fryatt, Horatio N. (See Paulsen, Herman G.C.)			
27793	Fullam, Adoniram J.	Springfield, Vt.	Punches	April 10, 1860.
30216	Fullam, Adoniram J.	Springfield, Vt.	Printing machine, stencil	Oct. 2, 1860.
29872	Fuller, Albert	Cincinnati, Ohio	Hydrants	Sept. 4, 1860.
28633	Fuller, Henry W., assignor to self and Anthony W. Goodell.	Brooklyn, N. Y.	Sewing machines, mechanism for marking cloth in	June 5, 1860.

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
27331	Fuller, J. C., and B. I. Woodward. (See Wright, Albert H., assignor.)	Brooklyn, N. Y.	Composition for painting the bottoms of vessels	Feb. 28, 1860.
28841	Fuller, Joseph G., assignor to Stephen Halstead, jr.	New York, N. Y.	Garter	June 26, 1860.
27861	Fuller, Josiah P.	Louisville, Ky.	Casting door numbers	April 10, 1860.
29260	Fuller, J. T., assignor to self and Joseph Landes.			
29260	Fuller, Warren & Co. (See Hathaway, David, assignor.)	Cranberry, N. J.	Lamps	July 24, 1860.
29873	Fulton, William	Worcester, Mass	Looms, power	Sept. 4, 1860.
26757	Furbish, D. H. (See Cummings, Perley D., assignor.)	Charlestown, Mass	Weighing apparatus	Jan. 10, 1860.
28268	Furbush, M. A., and George Crompton	Malden, Mass	Jacks, railroad	May 15, 1860.
28745	{ Furlong, E. P., and	Cleveland, Ohio	Fibrous materials, surfacing	June 19, 1860.
29478	{ Thomas Leavitt	Charlestown, Mass	Hat bodies, machinery for forming	Aug. 7, 1860.
30058	Furniss, F. H.	Charlestown, Mass	Fibrous material, manufacturing sheets of	Sept. 18, 1860.
27497	Fuzzard, William	Charlestown, Mass	Grain cleaners	Mar. 13, 1860.
	Gaard, Abram, assignor to self, John M. Gaar and William G. Scott.	Richmond, Ind		
29265	Gaer, Scott & Gaar. (See next above.)			
29071	Gage, George	Kendall's Mills, Me.	Bedstead, secretary	July 24, 1860.
28850	Gage, John S.	Dowagiac, Mich.	Seeding machines	July 10, 1860.
27862	Gaines, James W.	Melrose, Texas	Mill stone dress	June 26, 1860.
31001	Gale, Charles A., assignor to self and Spencer Russell.	Boston, Mass	Automatic mosquito fan	April 10, 1860.
	Gale, Warren, assignor to self and B. B. Belcher	Chicopee Falls, Mass	Straw, &c., machines for cutting	Dec. 18, 1860.
	Gale, W. J., and J. R. Willis. (See Hebbard, Alonzo, assignor.)			
29157	Gallager, Mahlon J.	Savannah, Ga	Fire-arms, breech-loading	July 17, 1860.
30853	Gallaher, John S., jr., assignor to Edwin and Cyrus Chambers, jr.	Washington, D. C.	Paper, machines for folding	Dec. 4, 1860.
30876	Galt, Thomas A.	Sterling, Ill.	Cultivator, seeding	Dec. 11, 1860.
30626	Gamble, Robert, jr.	Tallahassee, Fla.	Excavators, channel	Nov. 13, 1860.
26666	Gantz, Samuel	Beaver Creek, Md	Bedsteads, invalid's	Jan. 3, 1860.
27358	Garce, William M.	Granville, Ohio	Planters, corn	Mar. 6, 1860.
26667	Gardette, James, and Henry Rance.	New Orleans, La	Medical purposes, apparatus for forming vapor for	Jan. 3, 1860.
29371	Gardiner, Frederick	Gardiner, Me.	Mowing machines	July 31, 1860.
26668	Gardiner, Heman	New York, N. Y.	Carriages and railroad cars, springs for	Jan. 3, 1860.
30307	Gardiner, Leonard Y.	Amsterdam, N. Y.	Window sash supporter	Oct. 9, 1860.
29874	Gardiner, Perry G.	New York, N. Y.	Presses, cotton	Sept. 4, 1860.
30473	Gardiner, Perry G.	New York, N. Y.	Presses, cotton	Oct. 23, 1860.
27357	Gardner, Joseph W.	Shelburne Falls, Mass	Cutlery, table	Mar. 6, 1860.
29579	Gardner, Robert W.	Quincy, Ill.	Engines, steam, governors for	Aug. 14, 1860.
	Gardner, William C., et al. (See Crosby, Charles C., assignor.)			
30308	Garee, William M.	Cox, Ohio	Seeding machines	Oct. 9, 1860.
30139	Garlington, J. L.	Snapping Shoals, Ga	Sowing machines	Sept. 25, 1860.
29479	Garner, Lewis P.	Ashland Borough, Pa	Coal, apparatus for separating slate from	Aug. 7, 1860.

29480	Garrett, Henry.....	Richmond, Mo.....	Hinges, spikes for.....	Aug. 7, 1860.
29580	Garretson, R. M.....	Rhinebeck, N. Y.....	Camp stool.....	Aug. 14, 1860.
28359	Garver, Andrew A.....	Mechanicsburg, Pa.....	Digging machine.....	May 22, 1860.
29218	Garvey, Benjamin, assignor to self and Joseph B. Davol.....	New York, N. Y.....	Distillation of coal oil.....	July 17, 1860.
29158	Garvey, Benjamin.....	New York, N. Y.....	Bread, manufacture of.....	July 17, 1860.
29217	Garvey, Benjamin, assignor to self and Joseph B. Davol.....	New York, N. Y.....	Steam generator.....	July 17, 1860.
29216	Garvey, Benjamin, assignor to self and Joseph B. Davol.....	New York, N. Y.....	Lubricating pistons.....	July 17, 1860.
26669	Gately, Dennis C.....	Newtown, Conn.....	Rubber belting, India, manufacture of.....	Jan. 3, 1860.
26982	Gately, Dennis C.....	Newtown, Conn.....	Rubber belting, manufacturing.....	Jan. 31, 1860.
27440	Gately, Dennis C.....	Newtown, Conn.....	Belting, elastic.....	Mar. 13, 1860.
27863	Gates, P. W. (See Scoville & Fraser, assignors.)	Chicago, Ill.....	Mills, sugar, crushing rollers for.....	April 10, 1860.
28807	Gates, Philetus W., and D. R. Fraser, assignors to selves and Thomas Chalmers.	Chicago, Ill.....	Quartz, metal, machine for stamping.....	June 19, 1860.
29372	Gates, P. W.....	Chicago, Ill.....	Casting stamping heads.....	July 31, 1860.
28465	Gatling, Richard J.....	Indianapolis, Ind.....	Soil, machines for breaking and pulverizing the.....	May 29, 1860.
28978	Gatling, Richard J.....	Indianapolis, Ind.....	Cultivators, cotton.....	July 3, 1860.
29072	Gatling, R. J.....	Indianapolis, Ind.....	Lath machine.....	July 10, 1860.
29875	Gatling, Richard J.....	Indianapolis, Ind.....	Hemp brakes.....	Sep. 4, 1860.
30059	Gatling, Richard J.....	Indianapolis, Ind.....	Gearing, machine.....	Sep. 18, 1860.
29036	Gattman, Isaac M., assignor to self and H. G. Steibel.....	Cincinnati, Ohio.....	Brick machines.....	July 3, 1860.
30217	Gay, James P., assignor to self and D. C. King.....	Cincinnati, Ohio.....	Roofing purposes, composition for.....	Oct. 2, 1860.
28269	Gaylord, Emerson.....	Chicopee, Mass.....	Scabbards, bayonet, manufacture of.....	May 15, 1860.
28466	Gaylord, E. L.....	Terrysville, Conn.....	Keys, attaching bows to.....	May 29, 1860.
27122	Geaheart, Aaron W.....	Beallsville, Ohio.....	Beehives.....	Feb. 14, 1860.
29581	Gebby, William L.....	New Richland, Ohio.....	Planters, seed.....	Aug. 14, 1860.
308(8	Gee, W. V.....	New Haven, Conn.....	Bags, machinery for turning.....	Dec. 4, 1860.
29159	Gehr, John.....	Clear Spring, Md.....	Hominy machines.....	July 17, 1860.
28746	Geiermann, Joseph.....	Albany, N. Y.....	Sewing machines.....	June 19, 1860.
26983	Geiger, A.....	Dayton, Ohio.....	Lamps, burners for vapor.....	Jan. 31, 1860.
28467	Geiger, Albertus.....	Dayton, Ohio.....	Lamps, vapor.....	May 29, 1860.
30963	Geisinger, J. B., and D. H. S. Williams. (See Hunter & Geissenhainer.)	Montville, Ohio.....	Cultivators.....	Dec. 18, 1860.
30178	Geiston, Samuel F., John T. Johnson, and Charles R. Tompkins, assignors to Samuel F. Gelston and John T. Johnson.	Buffalo, N. Y.....	Stave machine.....	Sept. 25, 1860.
27542	Gengembre, H. P.....	Rochester, N. Y.....	Distillation of coal, apparatus for.....	Mar. 20, 1860.
28072	George, A. M.....	Allegheny, Pa.....	Mowing machines.....	May 1, 1860.
27710	George, Louis, and Joseph Villet-Colignon. (See Villet-Colignon & George.	Nashua, N. H.....	Zinc, lead, iron, cobalt, nickel, metallurgic operations applicable to certain ores of.	April 3, 1860.
27710	George, Robert.....	Mineral Point, Wis.....	Stoves.....	Aug. 21, 1860.
29687	George, William F.....	Cincinnati, Ohio.....	Mattress, spring, ventilating.....	Mar. 27, 1860.
27667	Geraghty, Robert W., assignor to self and Wm. M. Simpson.	Newark, N. J.....	Vessels, centre board for.....	July 3, 1860.
28979	Gerard, Daniel G.....	Patchogue, N. Y.....	Sails, main, of fore and aft vessels.....	May 22, 1860.
28360	Gerau, George W.....	Brooklyn, N. Y.....	Paddle wheel.....	April 10, 1860.
27794	Germain, Rollin.....	Buffalo, N. Y.....	Saw, reciprocating.....	Aug. 21, 1860.
29688	Germann, Christian.....	Camden, Mich.....	Mowing and reaping machines, drivers' seats for.....	Nov. 6, 1860.
30572	Getz, Franklin.....	Amherst, N. Y.....	Harrows, rotary.....	Nov. 27, 1860.
30728	Gevin, Peter, and Eli Foreman. (See Hunt, F. B., assignor.)	Sommerhill, Pa.....		

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
27214	Gibbs, James E. A., assignor to J. O. Wood.	Mill Point, Va.	Sewing machines.	Feb. 21, 1860.
1206	Gibbs, James E. A.	Mill Point, Va.	Sewing machines.	Feb. 21, 1860.
28851	Gibbs, James E. A.	Mill Point, Va.	Sewing machines.	June 26, 1860.
30627	Gibbs, John B.	Boston, Mass.	Skate, shoe, and foot check.	Nov. 13, 1860.
1188	Gibbs, S. W., assignor to North, Chase & North.	Albany, N. Y.	Stoves.	Jan. 10, 1860.
1212	Gibbs, Samuel W., assignor to Rathbone & Co.	Albany, N. Y.	Stove, plates of a cooking.	Mar. 20, 1860.
1211	Gibbs, Samuel W., assignor to S. H. Ramson & Co.	Albany, N. Y.	Stoves, tops and bases of.	Mar. 20, 1860.
1251	Gibbs, S. W., assignor to North, Chase & North.	Albany, N. Y.	Stove.	June 12, 1860.
1241	Gibney, M.	New York, N. Y.	Spoon and fork handles.	May 15, 1860.
28437	Gibson, A. J., assignor to self, John Boyden, Joseph P. Hale, and Samuel Fiske.	Worcester, Mass.	Fire-arms, revolving.	May 22, 1860.
29126	Gibson, A. J., assignor to self and J. P. Hale.	Worcester, Mass.	Fire-arms, revolving.	July 10, 1860.
30309	Gibson, A. J.	Worcester, Mass.	Fire-arms, revolving.	Oct. 9, 1860.
	Gibson, F. M., and D. A. Johnson. (See Johnson & Gibson.)			
28073	Gibson, Lyman.	Elmira, N. Y.	Water wheels.	May 1, 1860.
29964	Gibson, Oliver L.	Fort Bend county, Texas.	Planters, cotton seed.	Sept. 11, 1860.
27045	Gibson, William A.	New York, N. Y.	Brakes, self-acting, disengagement of.	Feb. 7, 1860.
27979	Giffard, Henry.	Paris, France.	Boilers, steam, feed water apparatus for.	April 24, 1860.
27441	Gifford, T. J.	Salem, Mass.	Brackets to buildings for scaffolding, securing.	Mar. 13, 1860.
29876	Gilbert, James R., and Stephen R. Weston.	Starkville, Ga.	Cultivators.	Sept. 4, 1860.
28168	Gilbert, N. S.	Dawson, Ga.	Shingle machine, method of feeding the bolt in.	May 8, 1860.
29779	Gilbert, Ransom.	Albion, N. Y.	Clothes dryer.	Aug. 28, 1860.
28570	Gilbert, Wade H., and H. O. Ames.	Morrisville, Vt.	Saccharine juices, apparatus for evaporating.	June 5, 1860.
30474	Gilchrist, John.	Bayou Gould, La.	Spoke machines.	Oct. 23, 1860.
29073	Gillaspie, Leroy C.	New Orleans, La.	Harrows.	July 10, 1860.
26758	Gill, Isaiah W.	Burlin City, Wis.	Sails, rig for reefing fore and aft.	Jan. 10, 1860.
27442	Gill, Richard, and George W. Grier.	Denmark, Tenn.	Boilers, steam, furnaces of.	Mar. 13, 1860.
29582	Gill, W. Y.	Exeter, N. H.	Cans, air pumps for exhausting and sealing.	Aug. 14, 1860.
30809	Gilleland, John.	Altoona, Pa.	Blasting rocks, mode of.	Dec. 4, 1860.
27284	Gillespie, Samuel.	Henderson, Ky.	Bedstead, folding.	Feb. 28, 1860.
26843	Gillett, Leonard.	Athens, Ga.	Water, method of raising.	Jan. 17, 1860.
26046	Gillett, William B.	New York, N. Y.	Files, &c., method of sharpening.	Feb. 7, 1860.
26759	Gilman, Samuel H.	North Colebrook, Conn.	Furnaces for burning bagasse.	Jan. 10, 1860.
27219	Gilman, Samuel H.	Auburn, N. Y.	Evaporating saccharine juices, apparatus for.	Feb. 21, 1860.
28361	Gilmore, John.	New Orleans, La.	Cotton, machines for cleaning.	May 22, 1860.
30023	Gilmore, Lucius M., assignor to self and J. M. May.	New Orleans, La.	Rock drilling machines.	Sept. 11, 1860.
1237	Gilmore, William H. (See Emerson, James, ass'r.)	Janesville, Wis.	Paint cans.	Apr. 24, 1860.
1238	Gilroy, Washington L.	Philadelphia, Pa.	Paint cans.	Apr. 24, 1860.
1239	Gilroy, Washington L.	Philadelphia, Pa.	Paint cans.	Apr. 24, 1860.
1240	Gilroy, Washington L.	Philadelphia, Pa.	Paint cans.	Apr. 24, 1860.

30310	Gilroy, Washington L.	Philadelphia, Pa.	Paint can	Oct. 9, 1860.
30218	Girvin, E. R., and J. Neldich. (See Neldich & Girvin.)	North Providence, R. I.	Fastener, sash	Oct. 2, 1860.
28747	Gladwin, Porter A.	Providence, R. I.	Screws, die plate for cutting	June 19, 1860.
30400	Gleason, E. P.	Providence, R. I.	Coupling socket	Oct. 16, 1860.
28468	Glidden, W. A., and A. Starkweather	Alvaretta, Wis.	Horse powers	May 29, 1860.
28571	Glover, Amos	Powhatan Point, Ohio	Crushers, corn and cob	June 5, 1860.
29074	Glover, Henry	East Douglass, Mass.	Windmills	July 10, 1860.
29362	Glover, J. H.	Glasgow, Ky.	Millstones, hanging	May 22, 1860.
30311	Gloyd, C.	Wynant, Ohio	Frame for bill of fare	Oct. 9, 1860.
29545	Gluyas, William, assignor to self and William H. O'Neill.	San Francisco, Cal.	Amalgamator	Aug. 7, 1860.
29587	Goar, John C.	Monterey, Cal.	Belt shipper	Aug. 14, 1860.
29433	Goddard, F. A., assignor to self and John H. Kennaday	Lexington, Ill.	Planters, corn	July 31, 1860.
30810	Goddin, N. A. H.	Wilson, N. C.	Cultivators, cotton	Dec. 4, 1860.
30917	Godfrey, Cist, & Kossak. (See Cist, Kossak, & Godfrey.)	Brooklyn, N. Y.	Boilers	Dec. 18, 1860.
28714	Godfrey, Edward A., assignor to Rogers, Smith & Co.	Hartford, Conn.	Cutlery, soldering handles to (A)	June 12, 1860.
28715	Godfrey, Edward A., assignor to Rogers, Smith & Co.	Hartford, Conn.	Cutlery, soldering handles to (B)	June 12, 1860.
29939	Godfrey, Solomon, Loren Barnes, Henry Blish, and Solomon S. Smith.	North Fairfield, Ohio	Stills	June 25, 1860.
26760	Goewey, George	Philadelphia, Pa.	Grain fans	Jan. 10, 1860.
26901	Gold, William L.	Allegheny, Pa.	Engines, steam	Jan. 24, 1860.
29583	Goldsmith, Schuyler	Watauga, Ill.	Cultivators	Aug. 14, 1860.
29877	Golsan, W. W.	Autaugaville, Ala.	Cultivators, cotton	Sep. 4, 1860.
29878	Golsan, W. W.	Autaugaville, Ala.	Planters, seed	Sep. 4, 1860.
28169	Gooch, J. H.	Oxford, N. C.	Ploughs	May 8, 1860.
29584	Goodall, Anthony W., et al. (See Fuller, Henry W., ass'r.)	Millbury, Mass.	Engine, rotary	Aug. 14, 1860.
28074	Goodell, Bardwell A.	New York, N. Y.	Knives, cylindrical, method of sharpening	May 1, 1860.
28469	Goodenough, R. A.	Brooklyn, N. Y.	Horse shoes	May 29, 1860.
30675	Goodspeed & Simonds. (See Simonds & Goodspeed.)	New Haven, Conn.	India rubber tips for shoes, vulcanizing	Nov. 20, 1860.
28170	Goodyear, Henry B.	Cowdersport, Pa.	Churn	May 8, 1860.
27359	Gordon, Edward W., and William H. Peckham.	New York, N. Y.	Spectacle temples	Mar. 6, 1860.
26761	Gordon, G. B. (See Bagot, E., ass'r.)	New York, N. Y.	Printing press	Jan. 10, 1860.
27281	Gordon, George P.	New London, Conn.	Watches	Feb. 28, 1860.
27443	Gorham, John	Beardstown, Ga.	Organ pipes	Mar. 13, 1860.
27360	Gorham, Jackson	Nashport, Ohio	Harvester, corn	Mar. 6, 1860.
26734	Gortner, H., and J. McCann.	Niagara Falls, N. Y.	Fire-arms, breech-loading	Jan. 3, 1860.
29780	Gorton & Tanner. (See Tanner & Gorton.)	North Wilbraham, Mass.	Gins, cotton	Aug. 28, 1860.
30519	Gould, Theodore P., assignor to Stephen V. R. Watson	New York, N. Y.	Vessels, port lights for	Oct. 23, 1860.
28716	Goulding, John	San Francisco, Cal.	Windlass, ship's	June 12, 1860.
28665	Gourlay, George C., assignor to self and A. Huntley	San Francisco, Cal.	Wrench	June 12, 1860.
27361	Gove, Andrew I.	San Francisco, Cal.	Presses, hay	Mar. 6, 1860.
29160	Gove, John H.	San Francisco, Cal.	Washing machine	July 17, 1860.
29585	Gowen, William	Wausau, Wis.	Press, copying	Aug. 14, 1860.
27362	Grabo, Charles Franz	Boston, Mass.	Boat, surf life	Mar. 6, 1860.
30312	Grace, John R.	Brooklyn, N. Y.	Gauge, steam	Oct. 9, 1860.
	Grader, G. W., and A. C. Wurzbach	Memphis, Tenn.		

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
27364	Graeber, Geo. W., Benj. F. Cowan, and A. C. Wurzbach.	Memphis, Tenn.	Boilers, steam, gauge for.	Mar. 6, 1860.
29586	Graessle, Gottlieb.	Hamilton, Ohio.	Tile machine, drain.	Aug. 14, 1860.
30219	Grafuis, Israel.	Alexandria, Pa.	Fire escape, portable.	Oct. 2, 1860.
29879	Graham, Alexander J.	Portland, Oregon.	Locomotive engines.	Sept. 4, 1860.
30964	Graham, Charles.	Scranton, Pa.	Valves to boilers, spring balances for safety.	Dec. 18, 1860.
30441	Graham, Edmund H.	Manchester, N. H.	Picker staff motion.	Oct. 16, 1860.
30278	Graham, Edmund H., assignor to Benjamin H. Whitcomb.	Manchester, N. H.	Skates.	Oct. 2, 1860.
27444	Graham, Henry H.	Paterson, N. J.	Railroad rails, connection for the ends of.	Mar. 13, 1860.
27047	Granger, R. D.	Albany, N. Y.	Stoves and ranges, cooking.	Feb. 7, 1860.
	Grannis, Calkins & Hoover. (See Calkins, Hoover & Grannis.)			
28470	Grant, Frederick T.	Gardiner, Me.	Sliver machines.	May 29, 1860.
	Grant, Warren & Co., et al. (See Jordan & Eustice, assignors.)			
30524	Gratz, R. H. (See Vasquez, C. L., assignor.)*			
	Gratz, Robert H., and Charles C. Lloyd, assignors to Robert H. Gratz.	Philadelphia, Pa.	Gas meters, dry.	Oct. 23, 1860.
27795	Graves, Charles S.	Elmira, Ohio.	Horse powers.	April 10, 1860.
30060	Graves, L. S.	Rochester, N. Y.	Boot and shoe soles, machine for cutting.	Sept. 18, 1860.
30729	Graves W. W., and W. A. Taylor. (See Taylor & Graves.)			
1192	Gray, Abel.	Fort Adams, Miss.	Ploughs, cotton.	Nov. 27, 1860.
28137	Gray, James A.	Wappenger's Falls, N. Y.	Combs, back.	Jan. 24, 1860.
30965	Gray, James S.	Albany, N. Y.	Piano fortes.	May 1, 1860.
30375	Gray, John, assignor to self, J. R. Weed, C. M. Clay, and J. W. Danford.	New York, N. Y.	Lamps, vapor.	Dec. 18, 1860.
26735	Gray, John S., assignor to self and D. Lyman.	Melrose, N. Y.	Washing machine.	Oct. 9, 1860.
26902	Gray, Solomon S., assignor to self and S. A. Woods.	Hartford, Conn.	Washing machine.	Jan. 3, 1860.
26875	Gray, William H., assignor to L. Robinson.	Boston, Mass.	Planing machine.	Jan. 24, 1860.
29880	Greacen, John, jr.	Dover, N. H.	Looms, power.	Jan. 17, 1860.
		New York, N. Y.	Locomotive engines, device for discharging the smoke, cinders, &c., from.	Sept. 4, 1860.
27123	Greeley, W. G.	Hingham, Mass.	Boots and shoes, machine for cutting out the uppers and soles of.	Feb. 14, 1860.
30376	Green, E. T., assignor to self and J. R. Folsom.	Stoneham, Mass.	Boot and shoe heels, machine for cutting.	Oct. 9, 1860.
28572	Green, James.	Kennett Square, Pa.	Planters, seed.	June 5, 1860.
28808	Green, John, assignor to Nathan Thompson, jr.	Brooklyn, N. Y.	Planing warped surfaces, machine for.	June 19, 1860.
29162	Green, Loure.	Great Bend, Pa.	Ploughs.	July 17, 1860.
29881	Green, T. H.	Fon-du-Lac, Wis.	Grain elevators.	Sept. 4, 1860.
29689	Green, Thomas M.	Milledgeville, Ga.	Planters, seed.	Aug. 21, 1860.
27363	Green, W. W.	Chelsea, Ill.	Cultivators.	Mar. 6, 1860.
27216	Greene, Chauncey O.	Troy, N. Y.	Stoves, cooking.	Feb. 21, 1860.
30604	Greene, Dyer, assignor to self and J. H. W. Page.	Boston, Mass.	Hullers, rice.	Nov. 6, 1860.
	Greene, John A. (See Minthorn, Daniel, assignor.)			
28471	Greene, S. S.	Rome, N. Y.	Tire, shrinking.	May 29, 1860.
	Greenfield, Ernst. (See McClelland, W. J., ass't.)			

29270	Greenhalgh, James, sen	Pascoag, R. I.	Looms, harness frames for	May 15, 1860.
29965	Greenlee, Edmund	Summerhill Township, Pa.	Stave jointer	Sep. 11, 1860.
30811	Greenlee, Edmund	Summerhill Township, Pa.	Barrels, machine for finishing the inside of	Dec. 4, 1860.
28852	Greenough, J. J.	New York, N. Y.	Pegging machines	June 26, 1860.
29163	Greenwood, Asa	Toulon, Ill.	Clothes frame	July 17, 1860.
29589	Greenwood, Asa	Toulon, Ill.	Tenoning frame	Aug. 14, 1860.
29588	Greenwood, William H.	Galva, Ill.	Lock	Aug. 14, 1860.
1242	Greer, James, and Rufus I. King	Dayton, Ohio	Stoves	Aug. 14, 1860.
29161	Gregg, John C.	Hillsboro', Ohio	Separators, grain	May 15, 1860.
29781	Gregory, Charles A.	Poughkeepsie, N. Y.	Bottles, apparatus for filling	July 17, 1860.
	Gregory, J. S., and O. Sturdevant. (See Sturdevant, Owen, assignor.)			Aug. 28, 1860.
28075	Grey, John	Pittsburg, Pa.	Metallic hollow ware, machine for spinning	May 1, 1860.
27217	{ Grice, Joseph, and	New York, N. Y.	Cars, city railroad, running gear of	Feb. 21, 1860.
30918	{ Robert H. Long.	Philadelphia, Pa.	Cars, city railroad	Dec. 18, 1860.
	{ Grice, Joseph, and	New York, N. Y.		
	{ Robert H. Long.	Philadelphia, Pa.		
30520	Grier & Gill. (See Gill & Grier.)			
27285	Griffin, Caleb H., assignor to Walter D. Richards	Lynn, Mass.	Boot and shoe soles, machine for cutting	Oct. 23, 1860.
28980	Griffin, George L., and J. H. Carper	Dallas City, Ill.	Plough, mole	Feb. 28, 1860.
28981	Griffin, John	Louisville, Ky.	Cotton pickers	July 3, 1860.
30475	Griffin, William	Bennettsville, S. C.	Plough	July 3, 1860.
	Griffith, Collins W.	Dayton, Ohio	Saws, mulley, device for adjusting the rake of	Oct. 23, 1860.
	Griffiths, John. (See Reckhow, Isaac, assignor.)			
	Griffiths, William, et al. (See Chadwick, Wm., assignor.)			
29373	Griggs, Justus	Utica, N. Y.	Screws, machine for making	July 31, 1860.
27282	Grimshaw, William D.	Newark, N. J.	Alarm, fire	Feb. 28, 1860.
28748	Grimshaw, William D.	Newark, N. J.	Air engine, hot	June 19, 1860.
30812	Grimshaw, William D.	New York, N. Y.	Mangle	Dec. 4, 1860.
28076	Griswold, N. F.	Meriden, Conn.	Pitcher, ice	May 1, 1860.
29966	Grojean, John, and F. T. Lomont. (See Lomont & Grojean.)	Aurora, Ill.	Harvesters, raking attachment for	Sep. 11, 1860.
27626	Gronberg, C. P.	Goshen Hill, S. C.	Ploughs, subsoil	Mar. 27, 1860.
26670	Gross, Ezekiel	Decatur, Ill.	Planters, corn	Jan. 3, 1860.
	Gross, John			
	Grover & Brooks. (See Brooks & Grover.)			
28472	Grover, Oliver F., and H. L. Pelouze	Middletown, N. Y.	Printers' rules, tool for mitering	May 29, 1860.
27900	Grundmann, Theodore	Freeport, Ill.	Crushing sugar cane, machine for	April 17, 1860.
28853	Grundy, Thomas	Boston, Mass.	Water closet	June 26, 1860.
	Guild, F., et al. (See Turner, J., assignor.)			
27711	Guild, Harvey	New Orleans, La.	Gas retorts, syphons attached to	April 3, 1860.
30402	Guile, Ezekiel	Waverly, Mo.	Hemp brakes	Oct. 16, 1860.
30966	Gun, Joseph and St. Clair	Marseilles, Ill.	Cultivators	Dec. 18, 1860.
27712	Gunner, Albert	Indianapolis, Ind.	Scales, automatic grain	April 3, 1860.
	Gunner, A., and James W. McLean. (See McLean & Gunner.)			
	Gunther, C. Godfrey, and T. Bell. (See Bell, T., assignor.)			
28854	Guptail, Daniel	Elgin, Ill.	Harvesters, raking attachment for	June 26, 1860.
27124	Guthrie, Sheldon	New Orleans, La.	Lamps	Feb. 14, 1860.
27445	Guyer, John	Westport, Conn.	Cultivators	Mar. 13, 1860.
30676	Gwynn, John J.	Plainfield, N. J.	Valve gear of steam engines	Nov. 20, 1860.
29482	Gwynn, Stuart	New York, N. Y.	Steam, method of generating	Aug. 7, 1860.
29782	Gwynn, Stuart	New York, N. Y.	Spading machines	Aug. 28, 1860.
29481	Gwynne, W. H.	New York, N. Y.	Gas, apparatus for compressing	Aug. 7, 1860.

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
27713	Gyles, James F.	Gilmer Township, Ill.	Seeding machines.	April 3, 1860.
26671	Habberton, William C.	Mount Carmel, Ill.	Collars, horse, apparatus for stuffing.	Jan. 3, 1860.
30967	Haage, Jacob.	Shiloh, Ill.	Ploughs, gang.	Dec. 18, 1860.
26984	Haight, Edgar	Buffalo, N. Y.	Paddle wheel.	Jan. 31, 1860.
26762	Hailey, Samuel D.	Jackson, Tenn.	Surveyor's level.	Jan. 10, 1860.
29483	Halderman, William.	Freeport, Ill.	Bolting flour, devices for.	Aug. 7, 1860.
28666	Hale, Elias J.	Foxcroft, Me.	Lamps.	June 12, 1860.
28749	Hale, Elias J.	Foxcroft, Me.	Lamps.	June 19, 1860.
28855	Hale, Elias J.	Foxcroft, Me.	Lamps.	June 26, 1860.
	Hale, Elias J. and Augustus. (See Jennison & Hale, assignors.)			
28473	Hale, Joseph P., et al. (See Gibson, N. J.)	Millford, Mass.	Horses' feet, cushions for.	May 29, 1860.
27627	Hale, Loren	Uniontown, Ill.	Cultivators	Mar. 27, 1860.
27714	Hall, John C.	Fayette, Miss.	Buckles	April 3, 1860.
29967	Hall, J. R.	Bangor, Me.	Curtain fixture.	Sept. 4, 1860.
29590	Hall, John S.	Brunswick, Me.	Sawing out shingles, machine for.	Sept. 11, 1860.
29591	Hall, John S.	West Manchester, Pa.	Ploughs	Aug. 14, 1860.
30813	Hall, John S.	West Manchester, Pa.	Ploughs	Aug. 14, 1860.
28363	Hall, Joseph F.	Manchester, Pa.	Plough clevis.	Sept. 4, 1860.
29335	Hall, Joseph F., assignor to self and G. L. Kelty	Bangor, Me.	Curtain fixtures.	May 22, 1860.
30140	Hall, Joseph L.	Cincinnati, Ohio.	Locks	Sept. 25, 1860.
29484	Hall, Origin, and Timothy Merrick.	West Willington, Conn.	Thread-dressing machines.	Aug. 7, 1860.
29690	Hall, Origin, and Timothy Merrick	West Willington, Conn.	Thread-dressing and finishing, machines for	Aug. 21, 1860.
30814	Hall, Origin and G.	West Willington, Conn.	Thread, machines for dressing.	Dec. 4, 1860.
28364	Hall, Samuel	Boston, Mass.	Mast, top, attachment of yards to	May 22, 1860.
28474	Hall, Samuel	New York, N. Y.	Shafting, coupling for	May 29, 1860.
28573	Hall, Samuel	New York, N. Y.	Shafting, coupling for	June 5, 1860.
29968	Hall, S. Z.	Seguin, Texas.	Gins, cotton, feeders for.	Sept. 11, 1860.
29485	Hall, Thomas.	St. Louis, Mo.	Printing presses, feeding apparatus for.	Aug. 7, 1860.
29164	Hall, William D.	Hamden, Conn.	Oils, fish.	July 17, 1860.
	Hall, William K., and E. Thomas. (See Thomas & Hall.)			
27901	Hallenbeck, Martin	Albany, N. Y.	Harvesting machines.	April 17, 1860.
30141	Haller, Jacob	Ann Arbor, Mich.	Electro-magnetic burglar's alarm.	Sept. 25, 1860.
	Haller, William L., and John M. Cooper. (See Cooper & Haller.)			
26672	Halloway, Isaac.	New York, N. Y.	Vehicles, axle box for.	Jan. 3, 1860.
26763	Halstead, Stephen, jr. (See Fuller, Joseph G., assignor.)			
26764	Halvorson, Halvor	Cambridge, Mass.	Candles, manufacture of	Jan. 10, 1860.
30313	Ham, James T.	Sinatobia, Miss.	Presses, cotton.	Jan. 10, 1860.
29486	Ham, James T.	Sinatobia, Miss.	Planters, cotton-seed.	Oct. 9, 1860.
	Hamaker, Abraham G.	Peoria, Ill.	Gas burners	Aug. 7, 1860.

30061	Hamann, Emanuel Ferdinand	Collis, N. Y.	Barometer	Sep. 18, 1860
26736	Hamer, James A., assignor to self and Norris Maris	Reading, Pa.	Brick moulds	Jan. 3, 1860
29271	Hamilton, Joseph F.	Pittsburg, Pa.	Engines, steam pumps for	July 24, 1860
28856	Hamlyn, John	Bellevue, Mich.	Stump extractor	June 26, 1860
27365	Hammon, Heman B.	Bristolville, Ohio	Planters, corn, band	Mar. 6, 1860
27797	Hammon, Heman B.	Bristolville, Ohio	Cultivator teeth	Apr. 10, 1860
27798	Hammond, A.	Jacksonville, Ill.	Plough, mole	Apr. 10, 1860
30919	Hammond, J. F.	Lynn, Mass.	Roofing, cement for	Dec. 18, 1860
29548	Hancock, George, assignor to self and Jas. M. Rutherford	Providence, R. I.	Hose coupling	Aug. 7, 1860
27630	Hanon, Jesse, jr.	Taylorville, Ill.	Ploughs, drain	Mar. 27, 1860
27218	Hanson, Thomas	New York, N. Y.	Water in buildings, apparatus for supplying	Feb. 21, 1860
28077	Hanvey, Alexander	Steubenville, Ohio	Boots and shoes, wooden soles for	May 1, 1860
28365	Hapgood, Asa	Worcester, Mass.	Ventilator for railroad cars	May 22, 1860
30445	Harbin, J. W., assignor to self and R. S. Willis	Delaware Station, Ind.	Planters, corn	Oct. 16, 1860
29843	Hardey, Joseph, assignor to O. Chamberlain and W. H. Babcock	Moline, Ill.	Ploughs	Aug. 28, 1860
30815	Hardick, John and Charles B.	Brooklyn, N. Y.	Valves	Dec. 4, 1860
27446	Hardie, Jason W.	New York, N. Y.	Churn	Mar. 13, 1860
30854	Hardie, Jason W., assignor to James H. Stevens	New York, N. Y.	Sewing machines	Dec. 4, 1860
30573	Hardiker, Toye & Watson. (See Watson, Hardiker & Toye.)			
29969	Hardin, A. I.	Shelby, N. Y.	Cotton seed, machines for cleaning	Nov. 6, 1860
28476	Harding, A. E.	Middletown, Ohio	Propellers, marine	Sep. 11, 1860
28078	Harding, Charles L.	Winoski Falls, Vt.	Wool, facilitating the removal of burrs from	May 29, 1860
	Harding, William W.	Philadelphia, Pa.	Printers, perforating rule for	May 1, 1860
	Hardy, Benjamin, administrator of Williamson. (See Williamson, Aaron, assignor.)			
30877	Hardy, J. T., et al. (See Rowe, Ell W., assignor.)	New York, N. Y.	Chair, recumbent	Dec. 11, 1860
27902	Hardy, Peter J.	Paterson, N. J.	Cock, oil	Apr. 17, 1860
28857	Hare, James, jr.	Delhi, Iowa	Type, machine for setting	June 26, 1860
29691	Harger, Henry	Anderson, Ind.	Planters, seed	Aug. 21, 1860
29165	Hariman, Leonard	Ercildown, Pa.	Washing machine	July 17, 1860
	Harlan, Amos B.			
	Harlan, W. J., and E. D. Barton. (See Barton, Richard C., assignor.)	Monmouth, Me.	Pegging jack	July 31, 1860
29434	Harlow, Ephraim L., assignor to William G. Brown			
	Harmer, James B., and Jacob Busser. (See Busser & Harmer.)	Carlisle, Pa.	Cans, preserve	May 22, 1860
28366	Harn, William H.			
	Harold, James H., et al. (See Harold, Thomas G., assignor.)			
28037	Harold, Thomas George, assignor to self and James H. Harold	Brooklyn, N. Y.	Needle case	April 24, 1860
28335	Harold, Thomas G., assignor to self and James H. Harold	Brooklyn, N. Y.	Keyholes, guards for	May 29, 1860
30878	Harold, Thomas G., and Gibbons L. Kely	New York, N. Y.	Curtain fixture	Dec. 11, 1860
28574	Harper, J. M., and R. S. Mushon. (See Mushon & Harper.)	Baltimore, Md.	Core boxes	June 5, 1860
26985	Harper, John S.	Riceville, N. J.	Fertilizers	Jan. 31, 1860
30220	Harper, Lewis	Trumbull, Ohio	Tanning	Oct. 2, 1860
29970	Harper, Robert	New York, N. Y.	Carpet lining, machine for making	Sep. 11, 1860
27543	Harrington, John K.	Newark, N. J.	Gas retorts	Mar. 20, 1860
27798	Harrington, Richard C.	New Brunswick, N. J.	Caoutchouc, vulcanizing	April 10, 1860
27799	Harris, Charles T.	Galena, Ill.	Boilers, steam, spark extinguisher for	April 10, 1860

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
26368	Harris, Elijah..... Harris, Elizabeth A. (See Stillman, A., deceased.) Harris, J. J. and W., and J. H. Mosher. (See Mosher & Harris.)	Princeton, Ill.....	Ploughs, spade.....	May 22, 1860.
27125	Harris, J. O., and W. F. Slewder.....	Ottawa, Ill.....	Cultivators.....	Feb. 14, 1860.
26673	Harris, Joseph.....	Dorchester, Mass.....	Axle boxes, car.....	Jan. 3, 1860.
29882	Harris, Joseph, jr.....	Roxbury, Mass.....	Cars, city railroad.....	Sept. 4, 1860.
28477	Harris, L. P.....	Mansfield, Ohio.....	Saccharine juices, apparatus for clarifying and evaporating.	May 29, 1860.
29783	Harris, L. W.....	Waterville, N. Y.....	Presses.....	Aug. 28, 1860.
27286	Harris, Theodore S.....	Boston, Mass.....	Cleaning tumblers, &c., apparatus for.....	Feb. 28, 1860.
28575	Harris, William A.....	Providence, R. I.....	Boots and shoes, heel guard for.....	June 5, 1860.
29784	Harrison, James.....	Troy, N. Y.....	Bells, apparatus for ringing.....	Aug. 28, 1860.
28982	Harrison, W. S..... Harroun, Sanford, Warren & Hill. (See Hebard, Hill & Rockwell, assignors.)	Carson's Landing, Miss.....	Tire on wheels, adjusting.....	July 3, 1860.
26844	Hart, Austin S.....	Buffalo, N. Y.....	Faucets.....	Jan. 17, 1860.
29374	Hart, Ira..... Hart, James C., and John Siddons. (See Siddons & Hart.)	Clarksburg, Va.....	Grain, machine for threshing and cleaning.....	July 31, 1860.
30816	Harte, R. E..... Hartford Carpet Company. (See Thompson, Henry G., assignor.) Hartford Manufacturing Company <i>et al.</i> (See White, Albert M., assignor.)	Martetta, Ohio.....	Ellipsograph.....	Dec. 4, 1860.
29166	Hartsfield, Jacob A.....	Kinston, N. C.....	Cultivators, cotton.....	July 17, 1860.
28858	Hartshorn, Henry M.....	Malden, Mass.....	Carpet stretcher.....	June 26, 1860.
29270	Hartshorn, Sheldon S.....	New Haven, Conn.....	Buckles.....	July 24, 1860.
28171	Harvey, Charles.....	Richmond, Ind.....	Sugar juices, apparatus for evaporating.....	May 8, 1860.
30225	Harvey, Joseph, and Edwin Ford.....	Philadelphia, Pa.....	Canes, &c., handles for.....	Oct. 2, 1860.
29280	Harvey, Thomas, and Nicholas J. Becky.....	Amsterdam, N. Y.....	Horse-power brake.....	July 24, 1860.
28576	Harwell, Vines.....	Walker County, Ga.....	Cultivators.....	June 5, 1860.
26986	Harwood, Forest H.....	Rushville, N. Y.....	Mortising machines.....	Jan. 31, 1860.
30628	Harwood, Luther W.....	Troy, N. Y.....	Stove grates.....	Nov. 13, 1860.
29785	Haskell, David.....	Georgetown, Mass.....	Sewing machines.....	Aug. 28, 1860.
27287	Haskell, Henry C.....	Marshall, Mich.....	Pen rack and pencil sharpener.....	Feb. 28, 1860.
28271	Haskell, John H.....	Baltimore, Md.....	Leather, machine for stretching.....	May 15, 1860.
28478	Hasker, Charles H.....	Portsmouth, Va.....	Boats, suspending.....	May 29, 1860.
30968	Haskins, Charles E.....	Providence, R. I.....	Studs, shirt.....	Dec. 18, 1860.
30314	Hasse, Ludwig H.....	New York, N. Y.....	Lamps, submarine.....	Oct. 9, 1860.
27800	Hartfield, Edward.....	Brownsville, Pa.....	Washboards.....	April 10, 1860.
1290	Hathaway, David, assignor to Fuller, Warren & Co.....	Troy, N. Y.....	Stoves, six plate..... (Design)	July 31, 1860.
1291	Hathaway, David, assignor to Fuller, Warren & Co.....	Troy, N. Y.....	Stove, coal..... (Design)	July 31, 1860.
30403	Hathaway, George W.....	Tioga, Pa.....	Corn shellers.....	Oct. 16, 1860.
30817	Hathaway, George W.....	Tioga, Pa.....	Feed cutters.....	Dec. 4, 1860.
29692	Hathaway, John M.....	New York, N. Y.....	Fastening for augers, handle.....	Aug. 21, 1860.

29883	Hathaway, John M.....	New York, N. Y.....	Augers.....	Sept. 4, 1860.
	Hathaway, John M., et al. (See Wuterich, Ferdinand, assignor.)			
27715	Hathaway, Joshua.....	Marietta, Ga.....	Device for converting reciprocating into rotary motion.....	April 3, 1860.
28983	Hathaway, William, assignor to self and D. H. Tillson.....	Providence, R. I.....	Clothes frame.....	July 3, 1860.
28859	Hathen, James.....	Philadelphia, Pa.....	Carpenter's square.....	June 26, 1860.
	Hauck, F. and G. (See Steffe, Jacob.)			
	Hauft, A. (See Cotty, Edward, assignor.)			
	Hauxhurst, L. B., et al. (See Peck, James W., jr.)			
30818	Haven, John.....	Boston, Mass.....	Shields for the head, insect.....	Dec. 4, 1860.
28667	Hawkins, A. B., and John Puntteny.....	Cameron, Ill.....	Plough, mole for drain.....	June 12, 1860.
29075	Hawkins, Horace R.....	Akron, Ohio.....	Hay racks for carts.....	July 10, 1860.
30677	Hawkins, Horace R.....	Akron, Ohio.....	Hay and straw cutters.....	Nov. 20, 1860.
29592	Hawkins, Lyman E.....	Sangamon, Ill.....	Cultivators.....	Aug. 14, 1860.
27980	Hawkins, Robert.....	Bealsville, Pa.....	Beehives.....	April 24, 1860.
28577	Hawley, James A.....	Jackson, Mich.....	Roofing houses, composition for.....	June 5, 1860.
27628	Hawley, R. K.....	Baltimore, Md.....	Saws, construction of circular.....	Mar. 27, 1860.
26987	Hawley, Wait N.....	Hartford, Conn.....	Boots and shoes, machines for pegging.....	Jan. 31, 1860.
26674	Hawse, B. B.....	Morrisville, Vt.....	Clothes dryer.....	Jan. 3, 1860.
	Hawse, B. B., et al. (See Hunt, Shippey & Hawse.)			
29693	Hay, Alexander.....	Philadelphia, Pa.....	Railroads, construction of.....	Aug. 21, 1860.
29342	Hay, John B., assignor to Hay & Co.....	Winslow, N. J.....	Furnaces, glass.....	July 24, 1860.
	Hayden, Holmes & Booth. (See Neilson, George, ass'r.)			
29971	Hayden, Isaac.....	Lawrence, Mass.....	Cotton cleaners.....	Sept. 11, 1860.
26903	Hayden, Joel B.....	Easton, N. Y.....	Boot and shoe sole.....	Jan. 24, 1860.
28367	Hayes, Abiel, and James Van Curen.....	Chenoo, Ill.....	Planters, corn.....	May 22, 1860.
28172	Hayes, George E.....	Buffalo, N. Y.....	Boilers, steam, thermometer cases for.....	May 8, 1860.
28568	Hayes, George E.....	Buffalo, N. Y.....	Rubber, apparatus for vulcanizing.....	June 12, 1860.
28750	Hayes, John P.....	Philadelphia, Pa.....	Plumbers' joints, making.....	June 19, 1860.
30819	Hayes, John P.....	Hennepin, Ill.....	Excavators.....	Dec. 4, 1860.
	Hayes, R. S., and D. P. Flinn. (See Flinn & Hayes.)			
28479	Hayes, S. I.....	Chicago, Ill.....	Tube joints, making.....	May 29, 1860.
28860	Haynes, Henry L.....	Keene, N. H.....	Shafting, coupling for.....	June 26, 1860.
30787	Hayward, Francis D., assignor to self and Daniel E. Hayward.	Malden, Mass.....	Caoutchouc, mode of holding sockets of moulds during vulcanization of.....	Nov. 27, 1860.
28634	Hayward & Rice. (See Rice, F., and G. W. Hayward.)			
	Haywood, Charles J., assignor to Merriman Manufacturing Company.	Durham, Conn.....	Tin boxes, making.....	June 5, 1860.
27903	Hazen, George W. L.....	Indianapolis, Ind.....	Sugar mills.....	April 17, 1860.
30062	Heald, William H.....	Baltimore, Md.....	Tanning, apparatus for.....	Sept. 18, 1860.
27048	Heard, Joseph M.....	Aberdeen, Miss.....	Traps, moth.....	Feb. 7, 1860.
28480	Heard, Joseph M.....	Aberdeen, Miss.....	Pessaries.....	May 29, 1860.
30629	Heard, Joseph M.....	Prairie Station, Miss.....	Railroad joints.....	Nov. 13, 1860.
27215	Heath, Jeremiah.....	Providence, R. I.....	Skates, heel screws for.....	Feb. 21, 1860.
28984	Heath, Jeremiah.....	Providence, R. I.....	Skates.....	July 3, 1860.
	Heath, J. W., and J. Carl. (See Carl & Heath.)			
	Heaton, David, 2d, et al. (See Williams, Turner, ass'r.)			
28079	Heatwole, John D., and R. C. Mauck.....	Harrisonburg, Va.....	Hominy mills.....	May 1, 1860.
29547	Hebard, George F., George J. Hill, and S. D. Rockwell, assignors to Sanford, Warren, Harroun, and Geo. J. Hill.	Buffalo, N. Y.....	Printing press.....	Aug. 7, 1860.
1320	Hebbard, Alonzo, assignor to W. Gale, jr., and J. R. Willis.	New York, N. Y.....	Spoons.....	Oct. 2, 1860.
27049	Heckscher, R.....	New York, N. Y.....	Cart, coal.....	Feb. 7, 1860.
29884	Hecox, Homer.....	Rutland, N. Y.....	Sap conductors.....	Sept. 4, 1860.

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
30404	Hedden, David B.	Newark, N. J.	Wood bending machines.	Oct. 16, 1860.
29487	Hefron, Daniel S.	Utica, N. Y.	Refrigerators.	Aug. 7, 1860.
30944	Heinemann, Hirsch, and John Buser, assignors to Hirsch Heinemann.	New York, N. Y.	Cord, machines for covering.	Dec. 18, 1860.
28481	Heinigke, Otto, and Moritz Laemmel.	Bay Ridge, N. Y.	Mosaic veneers.	May 29, 1860.
29167	Heller, Francis P., and Elias Young.	Cincinnati, Ohio.	Furnaces, warm air.	July 17, 1860.
29274	Helton, M. W.	Bloomington, Ind.	Registering fares, machine for.	July 24, 1860.
27716	Helwig, Theodore Augustus.	Minersville, Pa.	Prussian blue, manufacture of.	Apr. 3, 1860.
28080	Hemenway, Arthur.	Cleveland, Ohio.	Felloes, machine for bending.	May 1, 1860.
	Hemenway, Sidney S., et al. (See Walker, Sylvanus, assignor.)			
	Hemenway, S. S., and S. Walker. (See Walker, S., assignor.)			
30063	Hemingray, R.	Covington, Ky.	Glass jars, moulds for.	Sep. 18, 1860.
29168	Hemingway, Daniel.	Covington, Ky.	Fire-place and chimneys.	July 17, 1860.
30064	Heminway, M.	Watertown, Conn.	Swifts.	Sep. 18, 1860.
	Hemphill, J., and William S. Mackintosh. (See Mackintosh & Hemphill.)			
	Hemphill, S. H. (See Matthews, J. A., assignor.)			
29593	Henderson, Andrew A.	Philadelphia, Pa.	Reaping and mowing machines.	Aug. 14, 1860.
29594	Henderson, Andrew A.	Huntington county, Pa.	Reaping and raking grain and mowing grass.	Aug. 14, 1860.
30315	Henderson, Andrew A.	Portsmouth, N. H.	Engines, caloric.	Oct. 9, 1860.
	Henderson, D. (See Eastman, Henry, assignor.)			
29076	Henderson, John P.	Franklin, La.	Sugar kettle trains, arrangement of.	July 10, 1860.
28081	Henderson, Joseph C.	Albany, N. Y.	Stoves, cooking.	May 1, 1860.
28482	Henderson, Joseph C.	Albany, N. Y.	Stoves.	May 29, 1860.
28369	Henderson, William H.	Franklin, Ind.	Troughs, rain, machine for making.	May 22, 1860.
26988	Hendrick, William H., and Joseph Jacobs.	Mount Vernon, Ohio.	Lathes, back rest for.	Jan. 31, 1860.
28485	Hendricks, J. Moore.	Philadelphia, Pa.	Hullers, rice.	May 29, 1860.
29546	Hendry, T. C., assignor to self, J. Dillworth, S. H. Dean, T. J. Hutson, E. H. Patterson, and A. J. Hendry.	Conyers, Ga.	Vehicles, wheels for.	Aug. 7, 1860.
27126	Henkel, Frank I.	New York, N. Y.	Table, secretary.	Feb. 14, 1860.
26345	Henley, Henry W., assignor to Albert Palmer.	New York, N. Y.	Bedstead, ventilating.	Jan. 24, 1860.
28082	Henri, A.	Louisville, Ky.	Bonnets.	May 1, 1860.
30446	Henry, B. Tyler, assignor to Oliver F. Winchester.	New Haven, Conn.	Fire-arm, magazine.	Oct. 16, 1860.
26845	Henry, George G.	Mobile, Ala.	Oil from cotton seed, manufacture of.	Jan. 17, 1860.
26846	Henry, James Buchanan.	New York, N. Y.	Boiler plates, method of rivetting.	Jan. 17, 1860.
29279	Henry, John.	Lynchburg, Va.	Pressing tobacco.	July 24, 1860.
30730	Henry, John J.	North White Creek, N. Y.	Blind fastenings.	Nov. 27, 1860.
	Henry, Richard, and George C. Miller. (See Miller & Henry.)			
27167	Henshaw, John R., assignor to self and Samuel Babcock.	Middletown, Conn.	Skates.	Feb. 14, 1860.

29369	Henshaw, John R.....	Middletown, Conn.....	Mousing hook, self.....	June 12, 1860.
30534	Heppenstall, William.....	Springfield, Mass.....	Skirts.....	Oct. 30, 1860.
29169	Heptinstall, Thomas S.....	Mendota, Illinois.....	Ploughs, gang.....	July 17, 1860.
27639	Herbert, Henry W.....	Herbertsville, Va.....	Propellers, marine.....	Mar. 27, 1860.
27904	Hernance, L.....	Saratoga Springs, N Y.....	Pitcher, beer.....	April 17, 1860.
30316	Hernshoof, J. B., et al. (See Blondin, J. F., assignor.)	Lancaster, Pa.....	Corn planters.....	Oct. 9, 1860.
28751	Herr, Daniel, John & Joseph F.....	Leeds, Me.....	Cars, coupling and uncoupling.....	June 19, 1860.
29077	Herrick, William A.....	West Union, Iowa.....	Carpet sweeper.....	July 10, 1860.
29078	Herrick, George.....	Reidsburg, Pa.....	Planters, seed.....	July 10, 1860.
27668	Heupel, Ruof & Leuthy. (See Ruof, Heupel & Leuthy.)	San Francisco, Cal.....	Harrows, seeding.....	Mar. 27, 1860.
30969	Hewitt, Henry, assignor to W. A. Sanford	Cambridgeport, Mass.....	Slides for watch ribbons.....	Dec. 18, 1860.
27127	Hewitt & Drake. (See Drake & Hewitt.)	Philadelphia, Pa.....	Fire escape.....	Feb. 14, 1860.
30731	Hews, Augustus H.....	Richmond, Va.....	Sewing machines.....	Nov. 27, 1860.
27447	Heydrich, Gustav.....	Gardner, Mass.....	Timber bending machines, chain for.....	Mar. 13, 1860.
29786	Heyer, Frederick.....	Claremont, N. H.....	Railroad switches, operating.....	Aug. 28, 1860.
26847	Heywood, Levi.....	Hermitage, N. Y.....	Boilers, steam, feed water apparatus for.....	Jan. 17, 1860.
29170	Heywood, Simeon.....	Pike, Ill.....	Grain binders.....	July 17, 1860.
29694	Hibbard, Jacob.....	Morrisville, Vt.....	Clothes dryer.....	Aug. 21, 1860.
29341	Hickey, J. S.....	Grand View, Ind.....	Press, cotton and hay.....	July 24, 1860.
29268	Hickok, D. K.....	Boston, Mass.....	Sewing machines.....	July 24, 1860.
29079	Hicks, Horatio F., assignor to Hicks Brothers.....	New York, N. Y.....	Ships, side lights for.....	July 10, 1860.
29278	Hicks, William Cleveland.....	New York, N. Y.....	Water closet, portable.....	July 24, 1860.
26989	Hicks, Wolfe & Co. (See Vedder, N. S., assignor.)	Shelburne Falls, Mass.....	Pastry board.....	Jan. 31, 1860.
27801	Hidden, Enoch.....	Philadelphia, Pa.....	Valves, stop.....	April 10, 1860.
28752	Higby, Luther E.....	Somerville, Mass.....	Clothes wringer.....	June 19, 1860.
26765	Higgenbotham, Joseph.....	Charlestown, Mass.....	Anchor tripper.....	June 10, 1860.
29488	Higgins, Hatsel.....	Orleans, Mass.....	Tanning, composition for.....	Aug. 7, 1860.
28861	Higgins, Charles W., and.....	Dubuque, Iowa.....	Dating machine.....	June 26, 1860.
30317	Alben S. Willard.....	Buffalo, N. Y.....	Galvanic plates for medical use.....	Oct. 9, 1860.
28484	Hill, Alexander.....	Brooklyn, N. Y.....	Fabrics, pile, manufacture of.....	May 29, 1860.
28173	Hill, George J., et al. (See Hebard, Hill & Rockwell.)	Caton, N. Y.....	Sowing fertilizers.....	May 8, 1860.
26848	Hill, Hebard & Rockwell. (See Hebard, Hill & Rockwell.)	Americus, Ga.....	Skirts, skeleton.....	Jan. 17, 1860.
27288	Hill, Joseph.....	Naugatuck, Conn.....	Musical instruments.....	Feb. 28, 1860.
27802	Hill, Noble.....	Jersey City, N. J.....	Fork and spoon, culinary.....	Apr. 10, 1860.
30820	Hill, Robert J.....	New York, N. Y.....	Parer and cutter, peach.....	Dec. 4, 1860.
26737	Hill, R. W.....	Madison, Ga.....	Cant hook.....	Jan. 3, 1860.
27050	Hill, Urell C., and.....	Cedar Run, Pa.....	Piano-forte keys.....	Feb. 7, 1860.
29937	Henry J. Newton.....	New Haven, Conn.....	Planters, seed.....	Sept. 4, 1860.
	Hills, Andrew.....	Washington, D. C.....		
	Hills, S. C., et al. (See Dick, John, assignor.)			
	Hilsman, Henry St. I.....			
	Hinchman & Nolen. (See Nolen, J. S., and C. C. Hinchman.)			
	Hinds, Calvin P. (See Turner, Joshua, assignor.)			
	Hinds, Peter, assignor to self and W. Van Name.....			
	Hindsley, Henry William.....			
	Hine, Philander, and D. Ellis. (See Ellis & Hine.)			
	Hines, A. F., assignor to self and B. A. Kidder.....			

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
30920	Hiney, Jacob.....	Hartford, Conn.....	Faucets for bottles.....	Dec. 18, 1860.
29375	Hinman, David.....	Berea, Ohio.....	Grindstones, method of forming the centre for the shaft of..	July 31, 1860.
30574	Hinman, George C.....	Portageville, N. Y.....	Closets, water, seats for.....	Nov. 6, 1860.
29127	{ Hinman, Joseph, and.....	Watertown, Mass.....	Cultivators, cotton.....	July 10, 1860.
29489	{ D. S. French, assignors to themselves and N. King.....	Marietta, Ga.....	Coloring matter from oak bark, obtaining.....	Aug. 7, 1860.
30630	Hinrichs, Carl.....	New York, N. Y.....	Printing plates, &c., relief.....	Nov. 13, 1860.
28272	Hipple, A., et al. (See Dunham & Hipple.)	New York, N. Y.....	Heating buildings, boiler for....	May 15, 1860.
26849	Hitchcock, De Witt C., and E. B. and E. M. Larcher.....	Dayton, Ohio.....	Flower pots.....	Jan. 17, 1860.
30921	Hitchcock, J. R., and S. R. Atkins. (See Atkins & Hitchcock.)	New York, N. Y.....	Car brakes, railroad.....	Dec. 18, 1860.
27631	Hitchings, Charles F.....	Petersburg, Va.....	Tobacco screws.....	Mar. 27, 1860.
27632	Hoag, N., and William H. Tappey.....	Frederick, Md.....	Cultivators.....	Mar. 27, 1860.
29972	Hoake, Samuel.....	Jersey City, N. J.....	Washboard.....	Sept. 11, 1860.
27721	Hoagland, A.....	Watertown, N. Y.....	Clocks by currents of air, means of winding the spring of..	April 3, 1860.
27289	Hoard, Charles B.....	Providence, R. I.....	Nail plate feeder.....	Feb. 28, 1860.
28273	Hoard, J. W., and Thomas A. Searle.....	Philadelphia, Pa.....	Hoisting persons, &c., from one story of a building to another, machine for.	May 15, 1860.
30318	Hoats, D., and M. F. Norakonk. (See Norakonk & Hoats.)	Philadelphia, Pa.....	Fire escape.....	Oct. 9, 1860.
28753	Hobbs, James.....	Columbus, Ind.....	Fire wood, machine for bundling.....	June 19, 1860.
28174	Hobe, Charles J.....	New York, N. Y.....	Pictures, moulding for hanging.....	May 8, 1860.
29275	Hochstrasser, Henry.....	Philadelphia, Pa.....	Mill stones, machine for dressing.....	July 24, 1860.
28670	Hockenbury, George Z.....	Pittsburg, Pa.....	Railroad brakes.....	June 12, 1860.
30821	Hodge, Nehemiah.....	North Adams, Mass.....	Mill for crushing quartz, stamping.....	Dec. 4, 1860.
30822	Hodge, Samuel F.....	Detroit, Mich.....	Quartz rock, &c., machine for breaking.....	Dec. 4, 1860.
27051	Hodge, Samuel F.....	Detroit, Mich.....	Railroad switches.....	Feb. 7, 1860.
29269	Hodges, Silas H.....	Rutland, Vt.....	Ditching machine, mole.....	July 24, 1860.
27052	Hodgson, Isaiah.....	New Michigan, Ill.....	Shutters, metallic.....	Feb. 7, 1860.
27981	Hodgson, I.....	Indianapolis, Ind.....	Etching stone, composition for.....	April 24, 1860.
27053	Hodgson, David L. (See Jackson, Stephen, assignor.)	Baltimore, Md.....	Sawing machine, cross-cut.....	Feb. 7, 1860.
28175	Hoen, A.....	Belleville, Mich.....	Bayonet scabbards, frogs for.....	May 8, 1860.
29376	Hoerstmann, B., and F. & C. Kavemann. (See Kavemann & Hoerstmann.)	Solano County, Cal.....	Boiling and distilling, apparatus for.....	July 31, 1860.
30554	Hoffer, Jacob R. (See Hostetter, C. K., assignor.)	San Francisco, Cal.....	Harrow, rotary.....	Oct. 30, 1860.
30319	Hoffman, A. D.....	Cleveland, Ohio.....	Gas, apparatus for burning.....	Oct. 9, 1860.
	Hoffman, Samuel W., et al. (See Befield, Henry, assignor.)	Boston, Mass.....		
	Hoffman, William.....			
	Hoffmire, William.....			
	Hogle, Sidney S.....			
	Holt, Reuben W.....			
	Holabird & Company, et al. (See Clemens, Gilbert H.)			

29274	Holcomb, Alfred G.	New York, N. Y.	Telegraphic instruments	May 15, 1860.
30922	Holcomb, Jeddiah.	Brandon, Vt.	Scales, platform	Dec. 18, 1860.
30320	Holcomb, Lewis	Granby, Conn.	Leather, method of oiling	Oct. 9, 1860.
26675	Holden, Randall	New York, N. Y.	Bed bottom, spring	Jan. 3, 1860.
28275	Holland, James	Conshohocken, Pa.	Post-butt	May 15, 1860.
28578	Hollingsworth, James	Chicago, Ill.	Heating air by steam, apparatus for	June 5, 1860.
28475	Holloway, I. F.	Saline Mines, Ill.	Engines, steam traction	May 29, 1860.
1193	Holly, Birdsill	Lockport, N. Y.	Pumps, cistern	Jan. 24, 1860.
27128	Holly, Birdsill	Lockport, N. Y.	Pumps	Feb. 14, 1860.
28176	Holly, Birdsill	Lockport, N. Y.	Sewing machines	May 8, 1860.
1256	Holly, Birdsill	Lockport, N. Y.	Pump	June 19, 1860.
29266	Holly, Birdsill	Lockport, N. Y.	Pumps	July 24, 1860.
30678	Holly, Birdsill	Lockport, N. Y.	Hose coupling	Nov. 20, 1860.
28483	Holly, Solomon T.	Rockford, Ill.	Seeding machines	May 29, 1860.
29973	Holman, Ansel, and Oliver A. Kelly	Slaterville, R. I.	Scythes, machine for hardening	Sept. 11, 1860.
29276	Holmes, Booth & Hayden. (See Neilson, George, ass'r.)	Waterbury, Conn.	Tubes, forming seamless	July 24, 1860.
26766	Holmes, C. E. L.	Buffalo, N. Y.	Staves, machine for dressing	Jan. 10, 1860.
28754	Holmes, Edward and Britain	Lynn, Mass.	Boots, congress	June 19, 1860.
30221	Holmes, Henry S.	St. Clair, Pa.	Pumps	Oct. 2, 1860.
29787	Holmes, John	Cincinnati, Ohio	Engines, rotary	Aug. 28, 1860.
28177	Holmes, P. B.	Worcester, Mass.	Churn	May 8, 1860.
28862	Holmes, Reuben G.	New York, N. Y.	Fire-escape	June 26, 1860.
30732	Holwell, J. J.	Rochester, N. Y.	Cracker machine	Nov. 27, 1860.
30222	Holyland, J. & J. C.	Walden, N. Y.	Rakes, hay	Oct. 2, 1860.
26676	Homan, S. J.	Laona, N. Y.	Straw cutters	Jan. 3, 1860.
27905	Homes, N.	Seneca Falls, N. Y.	Pumps	Apr. 17, 1860.
26990	Hood, Cornelius	Millwaukee, Wis.	Car couplings	Jan. 31, 1860.
29219	Hood, Joel	Turner, Me.	Cars, railway, coupling for	July 17, 1860.
29219	Hood, Otis, jr., assignor to self and H. G. Le Baron	Washington, D. C.	Cutters, ice shavers, &c., revolving	Jan. 31, 1860.
26991	Hope, William H.	Bergen, N. J.	Railroad chairs	Oct. 23, 1860.
30476	Hopkins, David A.	Easton, Md.	Burners, vapor	April 3, 1860.
27718	Hopkins, Samuel B., and Edward H. Anderson	Newport, Ky.	Sack fastener	Aug. 21, 1860.
29695	Hopkins, Thomas	New York, N. Y.	Boilers, steam, low water detector for	July 24, 1860.
29277	Hopkins & Williams, et al. (See Durkee, Wm. C., ass'r.)	Boston, Mass.	Sewing machines, the needle holder of	Mar. 6, 1860.
27409	Hopper, Joel W., assignor to self and E. G. Allen	Cincinnati, Ohio	Cars, railroad, running gear for	Apr. 24, 1860.
27982	Horn, George H., assignor to self and Edwin B. Horn	Newark, N. J.	Fastenings, window sash	July 24, 1860.
29273	Hornig, Julius	Brooklyn, N. Y.	Telegraph cables, laying	Jan. 3, 1860.
26677	Horstman, William H.	Elmira, N. Y.	Hulling and polishing rice, machines for	Aug. 28, 1860.
29788	Horton, Chase B.	Philadelphia, Pa.	Stoves, plates of	Sept. 25, 1860.
1314	Horton, James, and John Martino. (See Martino & Horton.)	Philadelphia, Pa.	Stoves, cylinder, plates of	Sept. 25, 1860.
1315	Horton, J., and J. Martino, assignors to D. Stuart and R. Peterson.	Schuyler's Lake, N. Y.	Water wheels	Mar. 13, 1860.
27448	Horton, J., and J. Martino, assignors to D. Stuart and R. Peterson.	East Donegal Township, Pa.	Bag holder and conveyor	Dec. 18, 1860.
30943	Hosford, W. W., assignor to self and Lucius O. Veber	Sharon, Conn.	Cartridge	July 10, 1860.
29080	Hosford, Smith & Butler. (See Butler, Hosford & Smith.)	Sharon, Conn.	Projectiles for rifled ordnance	July 24, 1860.
29272	Hosner, J. M., and L. Updike. (See Cleveland, N. B., assignor.)	Yellow Springs, Ohio	Tile machine, drain	Mar. 27, 1860.

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
29171	Hotchkiss, James	Yellow Springs, Ohio	Brick machines	July 17, 1860.
29394	Hotz, Nikolaus	Trenton, N. J.	Hose pipes, nozzles for	Jan. 31, 1860.
29863	Houghtelin, J. W.	Du Quoin, Ill.	Bran duster	June 26, 1860.
296767	Houghton, Nestor. (See Berg, William, assignor.)	Philadelphia, Pa.	Lamps	Jan. 10, 1860.
29696	Houghton, Thomas	Philadelphia, Pa.	Lamps	Jan. 10, 1860.
29885	House, George E., et al. (See Neal & Emery, assignors.)	Brooklyn, N. Y.	Gates	Aug. 21, 1860.
29885	House, Henry A.	Brooklyn, N. Y.	Harrows	Sept. 4, 1860.
29885	House, Mark W.	Cleveland, Ohio	Harrows	Sept. 4, 1860.
29885	Houseman, Michael	Huntington, Ind.	Corn shellers	Sept. 4, 1860.
1213	Hover, Philip A., et al. (See Calkins, Hover & Grannis.)	New York, N. Y.	Press, copying	Mar. 20, 1860.
29178	Hovey, Francis	Bedford, Mich.	Hame tugs	May 8, 1860.
27633	Hovey, Jacops	Lockport, N. Y.	Pulley blocks	Mar. 27, 1860.
29692	Hovey, J. L.	Lockport, N. Y.	Pulley blocks	Mar. 27, 1860.
29692	Hovey, M. H., et al. (See Burton, O. F., assignor.)	Lockport, N. Y.	Pulley blocks	Mar. 27, 1860.
29692	How, Thomas P.	New York, N. Y.	Inkstand	Jan. 31, 1860.
29885	Howard, Abel T.	Hartford, Vt.	Odometers	July 3, 1860.
27803	Howard, Ansel, Jr.	Readsborough, Vt.	Wooden ware, machine for making	April 10, 1860.
28864	Howard, George C.	Philadelphia, Pa.	Printing press	June 26, 1860.
27906	Howard, James L.	Hartford, Conn.	Cords, ropes, &c., coupling attachment for	April 17, 1860.
29535	Howard, Jason G.	South Braintree, Mass.	Tacks, machine for applying washers to	Aug. 14, 1860.
27129	Howard, William H.	Philadelphia, Pa.	Screw thread on rollers, machine for serrating the edge of a	Feb. 14, 1860.
27804	Howe, Joseph, et al. (See Ballard, Allen S., assignor.)	Louisville, Ky.	Hammer, trip	April 10, 1860.
27807	Howe, Lane, Adams & Hoyt. (See Hoyt, F. A., assignor.)	Ottawa, Ill.	Planters, corn	April 10, 1860.
28370	Howell, B. H., and John Cotton. (See Appleton, Charles J., assignor.)	Ottawa, Ill.	Paper, safety	May 22, 1860.
27290	Howell, David	Ottawa, Ill.	Gins, cotton	Feb. 28, 1860.
27806	Howells, Henry Charles	New York, N. Y.	Head supporting apparatus for travellers	April 10, 1860.
27805	Howells, Joseph Charles	Madison, Wis.	Needle guards	April 10, 1860.
28865	Howells, Joseph Charles	Madison, Wis.	Nozzle for fire engines	June 26, 1860.
26768	Howland, Erastus, et al. (See Wells, Samuel J., assignor.)	Providence, R. I.	Sifters, coal	Jan. 10, 1860.
27544	Howland, G., and J. B. Palser. (See Palser & Howland.)	Waterbury, Conn.	Window frames, adjustable stops for	Mar. 20, 1860.
27498	Howland, Gardner, et al. (See Palser & Howland.)	Boston, Mass.	Boilers, steam, magnetic gauge for	Mar. 13, 1860.
27220	Howland, H. J., et al. (See Rollings, A. D., assignor.)	Brooklyn, N. Y.	Coal, machinery for breaking	Feb. 21, 1860.
26393	Howland, John A.	Providence, R. I.	Sifters, coal	Jan. 10, 1860.
28083	Hoyt, John W. (See Virolet, Jean Baptiste, assignor.)	Wilmington, Del.	Mill spindles	Jan. 31, 1860.
27221	Hoyt, Samuel	Wilmington, Del.	Millstones, cementing	May 1, 1860.
26769	Hubbard, Charles W.	Pittsburg, Pa.	Saws, machine for grinding and polishing	Feb. 21, 1860.
26769	Hubbard, George W.	Meriden, Conn.	Molasses gate	Jan. 10, 1860.

30321	Hubbard, Gilbert.	Montville, Mass.	Faucets, measuring	Oct. 9, 1860.
28276	Hubbard, Richard.	Milton, Ind.	Bedstead fastening.	May 15, 1860.
1207	Hubbell, H. S., T. H. Wood, and J. E. Roberts.	Buffalo, N. Y.	Stoves (Design.)	Feb. 21, 1860.
1243	Hubbell, H. S., and Thomas H. Wood.	Buffalo, N. Y.	Stove plates (Design.)	May 15, 1860.
26904	Hubbell, William Wheeler.	Philadelphia, Pa.	Projectiles for fire-arms	Jan. 24, 1860.
28484	Hubbell, William Wheeler.	Philadelphia, Pa.	Projectiles for breech-loading ordnance.	May 1, 1860.
28486	Hubbell, William W.	Philadelphia, Pa.	Ordnance, breech-loading	May 29, 1860.
26678	Huber, Jean Jacques.	Geneva, Switzerland.	Jewelry.	Jan. 3, 1860.
26770	Hubler, McGrath & Richards. (See Richards, J. C., assign'r.)	Lafayette, Ind.	Seeding machines.	Jan. 10, 1860.
29887	Hudson, John W.	Milford, Mich.	Dams, mill, self acting waste gate for	Sept. 4, 1860.
28277	Huestis, David.	Cold Spring, N. Y.	Moulding shot and shells.	May 15, 1860.
29789	Huff, Enoch S.	Zanesville, Ohio.	Cultivators	Aug. 28, 1860.
28371	Huffman, Samuel	Richmond, Va.	Sewing machines	May 22, 1860.
27291	Huggins, John S.	Timmons ville, S. C.	Planters, seed	Feb. 28, 1860.
28372	Huggins, John S.	Timmons ville, S. C.	Ploughs	May 22, 1860.
28487	Hughes, Allen.	Gratiot, Ohio.	Ploughs, cultivating	May 29, 1860.
29343	Hughes, Charles, assignor to self and Henry Fassman.	New Orleans, La.	Punching machine	July 24, 1860.
30322	Hughes, Charles.	New Orleans, La.	Hoops, &c., bale, machine for straightening	Oct. 9, 1860.
28086	Hughes, Elisha	McCartysville, Cal.	Desk, writing	May 1, 1860.
27907	Hughes, Stephen.	Hamilton, Ohio.	Separators, flour.	April 17, 1860.
28085	Hughes, Thomas E.	Birmingham, Pa.	Cup, shaving	May 1, 1860.
29697	Hugunin, R. B., and G. W. Whitney.	Cleveland, Ohio.	Washing machine.	Aug. 21, 1860.
26679	Hulburt & Cowles. (See Cowles & Hulburt.)	Berea, Ohio.		
29974	Hulburt, L. T.	Painesville, Ohio.	Seaming machine, double	Jan. 3, 1860.
29790	Hull, F. A.	Belvidere, Ill.	Boilers, steam, gates for	Sept. 11, 1860.
28488	Hull, George.	Port Crane, N. Y.	Cattle ties	Aug. 28, 1860.
28373	Hull, Liveras	Charlestown, Mass.	Ratan machine	May 29, 1860.
28374	Hull, Stephen	Poughkeepsie, N. Y.	Mills, plates to	May 22, 1860.
29081	Hulskamp, G. Henry	Troy, N. Y.	Piano forte action	May 22, 1860.
27720	Hulskamp, G. Henry	Troy, N. Y.	Piano fortes	July 10, 1860.
29267	Humberger, Adam	Somerset, Ohio.	Harvesters, corn	April 3, 1860.
29172	Humphreville, Henry, jr.	Strasburg, Pa.	Hot water apparatus	July 24, 1860.
30405	Humphrey, James Y.	Philadelphia, Pa.	Lamps, chimney for	July 17, 1860.
30224	Humphrey, R.	Unionville, Conn.	Punches	Oct. 16, 1860.
26818	Humphreys, William.	Cold Spring, N. Y.	Engines, rotary	Oct. 2, 1860.
27634	Hunt, George W.	Cincinnati, Ohio.	Mills	Jan. 10, 1860.
27983	Hunt, H. C.	Muscantine, Iowa.	Ploughs	Mar. 27, 1860.
27292	Hunt, L. D., G. R. Shippey, and B. B. Hawse.	Ottumwa, Iowa.	Planes, bench	April 24, 1860.
29791	Hunt, Simon B. (See Adams, Henry B., assignor.)	Morrisville, Vt.	Washing machine	Feb. 28, 1860.
26738	Hunt, Solomon.	Danville, Indiana.	Washing machine	Aug. 28, 1860.
30142	Hunt, Thomas E., assignor to Hunt, Brawner & Co.	Louisville, Ky.	Mills grinding	Jan. 3, 1860.
1347	Hunt, W. L. (See Ketchum & Hunt.)	Hudson, N. Y.	Stoves, cooking	Sept. 25, 1860.
26947	Hunt, Zebulon	Hudson, N. Y.	Stove (Design)	Dec. 4, 1860.
28236	Hunter, Andrew, assignor to self and Peter Hunter.	Herefords, Va.	Trap, rat	Jan. 24, 1860.
	Hunter, Charles H., assignor to self and Wm. Thornberry.	Indianapolis, Ind.	Scales, grain	May 8, 1860.

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
27670	Hunter, Jacob F., assignor to self, H. A Hunter, and P. P. Keller.	New York, N. Y.	Hot water apparatus.....	Mar. 27, 1860.
30065	Hunter, Jacob F., and F. W. Geissenhainer.....	New York, N. Y.	Heating apartments by hot water, apparatus for.....	Sept. 18, 1860.
28179	Hunter, J. M.....	New York, N. Y.	Fat, machine for cutting.....	May 8, 1860.
29596	Hunter, John Morrison.....	New York, N. Y.	Glue, preparation of.....	Aug. 14, 1860.
30575	Hunter, J. Morrison.....	New York, N. Y.	Oils, apparatus for trying.....	Nov. 6, 1860.
	Huntington, W. T., and Harvey Platt. (See Mix, E. M., and J. E., assignors.)			
	Huntley, A., et al. (See Gourley, George C., assignor.)			
	Huntley, Bowman & Co. (See Bowman, John M., assignor.)			
	Huntley, Byron E., et al. (See Landon, Frederick, assignor.)			
30733	Huntley, Hosea, and William Caven.....	Cincinnati, Ohio.	Stoves, cooking.....	Nov. 27, 1860.
28671	Huntly, John C.....	Philadelphia, Pa.	Alarm, burglar's.....	June 12, 1860.
30823	Hunzinger, George.....	Brooklyn, N. Y.	Table, extension.....	Dec. 4, 1860.
	Hurd, R. B., and L. B. Batcheller. (See Batcheller, L. B., assignor.)			
30323	Hurlburt, Kellogg T., and Howard Thompson.....	Port Byron, N. Y.	Canal locks, &c., operating gates of.....	Oct. 9, 1860.
28986	{ Hurlbut, Westel W., and.....	Muscatine, Iowa.	Staves, machine for sawing.....	July 3, 1860.
	{ J. Burrell.....	Chicago, Ill.		
29082	Hurst, A. R.....	Chambersburg, Pa.	Rakes, horse hay.....	July 10, 1860.
30223	Hurxthal, C. B., and John Lee.....	Bolivar, Ohio.	Gates.....	Oct. 2, 1860.
27875	Huse, William W.....	Brooklyn, N. Y.	Steering apparatus.....	April 10, 1860.
30679	Hutchings, Charles B.....	Rochester, N. Y.	Separators, grain.....	Nov. 20, 1860.
29597	Hutchings, Sabin, and Joseph D. Leach.....	Penobscot, Me.	Churn.....	Aug. 14, 1860.
27635	Hutchings, A. B.....	Quincy, Fla.	Seeding machines.....	Mar. 27, 1860.
28866	Hutchinson, Augustus P.....	Pembroke, N. H.	Whiffle-trees to sleighs, attaching.....	June 26, 1860.
30024	Hutchinson, Charles B.....	Auburn, N. Y.	Mills for grinding grain and apples.....	Aug. 7, 1860.
27449	Hutchinson, Charles B., assignor to R. A. Hutchinson.....	Auburn, N. Y.	Barrel head machine.....	Sept. 11, 1860.
	Hutchinson, H. M.....	Baltimore, Md.	Furnace for railroad cars.....	Mar. 13, 1860.
29490	Hutchinson, S. E. (See Reed, John C., assignor.)			
30406	Hutchinson, J. J., and J. D. Brandberry.....	Cape Gerardeau, Mo.	Brick moulding machines.....	Oct. 16, 1860.
	Hutson, T. J., et al. (See Hendry, T. C., assignor.)			
	Hutton, W. M., and G. W. Billings. (See Billings & Hutton.)			
30407	Hyde, Edward J.....	Philadelphia, Pa.	Mills, grinding.....	Oct. 16, 1860.
29792	Hyde, Gordian K.....	Brooklyn, N. Y.	Railroad switches, operating.....	Aug. 28, 1860.
28498	Hyde, J. Burrows.....	Newark, N. J.	Felt, sheathing, machinery for manufacturing.....	May 29, 1860.
28579	Hyde, J. Burrows.....	Newark, N. J.	Casting metals, materials for facing moulds for... ..	June 5, 1860.
30680	Hyde, J. Burrows.....	Newark, N. J.	Blow-pipe operations, composition for supports in.....	Nov. 20, 1860.
29491	Hyde, William.....	Emery, Ohio.	Beehives.....	Aug. 7, 1860.
30576	Iddings, Warren.....	Warren, Ohio.	Embalming dead bodies.....	Nov. 6, 1860.
28181	Ingalls, Elias T.....	Haverhill, Mass.	Boot and shoe soles, machine for burnishing the edges of..	May 8, 1860.
28580	Ingalls, Elias T.....	Haverhill, Mass.	Leather, machine for skiving.....	June 5, 1860.

28375	Ingersoll, John R.	New York, N. Y.	Brush, hair.	May 22, 1860.
28180	Ingraham, C. L., and Emory Rounds.	Berlin, Wis.	Washing machine.	May 8, 1860.
29492	Ingraham, Lewis S.	Grafton, Ohio.	Butter worker.	Aug. 7, 1860.
27545	Ingram, James.	New York, N. Y.	Sinks, fitting.	Mar. 20, 1860.
29083	Irving, Benjamin.	New York, N. Y.	Syringes.	July 10, 1860.
27130	Irwin, Charles S.	Madison, Ind.	Starch, manufacture of.	Feb. 14, 1860.
28278	Irwin, Charles S.	Madison, Ind.	Starch, construction of machinery for cleaning.	May 15, 1860.
29698	Irwin, John H.	Bardtown, Ill.	Harvesters.	Aug. 21, 1860.
29699	Isaacsen, Adolph.	New York, N. Y.	Destroying insects, construction of apparatus for.	Aug. 21, 1860.
29281	Isbell, Charles W.	New Haven, Conn.	Joint, gas and water pipe.	July 24, 1860.
27294	Isam, Henry.	New Britain, Conn.	Locks.	Feb. 28, 1860.
29493	Iske, Anthoni.	Lancaster, Pa.	Cupboard and sink.	Aug. 7, 1860.
27984	Ives, James.	Mount Carmel, Conn.	Harness pads.	April 24, 1860.
30824	Ives, Lawson C., and Hezekiah Conant.	Hartford, Conn.	Thread, machines for dressing.	Dec. 4, 1860.
29174	Ives, Lawson C.	Hartford, Conn.	Thread polishing machines.	July 17, 1860.
29793	Ives, W. A.	New Haven, Conn.	Auger.	Aug. 28, 1860.
27808	Ivey, W. D., and M. Rigell. (See Rigell & Ivey.)	Milford, Ga.	Ploughs.	April 10, 1860.
30880	Jackman, Ben.	Louisville, Ky.	Cotton cleaning machines.	Dec. 11, 1860.
26129	Jackman, Humphrey, assignor to James H. Deming and T. H. Jenkins.	Elizabethport, N. J.	Cars, railroad, journals and boxes for.	May 1, 1860.
29377	Jackson, James, jr.	Westerly, R. I.	Oil cans.	July 31, 1860.
28890	Jackson, Peter H., et al. (See Demick, Henry, ass'r.)	Ossipee, N. H.	Blind slat machine.	June 19, 1860.
30923	Jacob, I. Robin.	Elizabethtown, Ky.	Valve gear for steam engines.	Dec. 18, 1860.
26680	Jacobs, Enoch.	Cincinnati, Ohio.	Bridges, truss frame for.	Jan. 3, 1860.
27222	Jacobs, Enoch.	Cincinnati, Ohio.	Metal, joining plates of.	Feb. 21, 1860.
29282	Jacobs, E.	Cincinnati, Ohio.	Prisons, iron.	July 24, 1860.
29650	Jacobs, H. M., assignor to Thomas J. Vail.	Hartford, Conn.	Burnishing spoons, machine for.	Aug. 14, 1860.
30734	Jacobs, Henry M.	Hartford, Conn.	Burnishing spoons, machine for.	Nov. 27, 1860.
28755	Jacobs, J., and William H. Hendrick. (See Hendrick & Jacobs.)	Worcester, Mass.	Portfolio paper file.	June 19, 1860.
30143	Jacobs, John.	Columbus, Ohio.	Beehives.	Sept. 25, 1860.
28279	Jacobs, Zalmon S.	Hebron, Conn.	Screw plates.	May 15, 1860.
29581	James, Hiram.	Barclay, Ill.	Liquids, measuring apparatus for.	June 5, 1860.
30924	Jameson, John.	Gateshead, Eng.	Fluids, elastic, apparatus for expanding and compressing.	Dec. 18, 1860.
27054	Jagues, H. H., et al. (See Boyden, Seth, ass'r.)	Canton, Ohio.	Egg beater.	Feb. 7, 1860.
27908	Jay, James M., assignor to self and John Danner.	Canton, Ohio.	Egg beater.	April 17, 1860.
29909	Jeffers, William.	Pawtucket, R. I.	Pump valves.	April 17, 1860.
28672	Jelliff, H. Wesley.	Appleton, Ohio.	Dovetailing machines.	June 12, 1860.
28867	Jenifer, Walter H.	Baltimore, Md.	Saddle, military.	June 26, 1860.
28987	Jenkins, Benjamin A.	White Water, Wis.	Windrowing sugar cane, machines for.	July 3, 1860.
29084	Jenkins, Benjamin A.	White Water, Wis.	Harvesters.	July 10, 1860.
29378	Jenkins & Deming. (See Rice, Harvey, ass'r.)	Springfield, Mass.	Skates.	July 31, 1860.
28756	Jenkins, E. Curtis, jr.	Philadelphia, Pa.	Composition for lining safes.	June 19, 1860.
	Jenkins, Elijah W., et al. (See Jenkins, Joseph H., ass'r.)			
	Jenkins, Jabez.			

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
27021	Jenkins, Joseph H., assignor to self and Elijah W. Jenkins.	Smithville, Mo.	Mill, saw	Jan. 31, 1860.
30066	Jenkins, Joshua.	Boston, Mass.	Glass lamps, moulds for	Sept. 18, 1860.
29598	Jenkins, Nicholas	New York, N. Y.	Wagon springs	Aug. 14, 1860.
28582	Jenkins, Reuben	Covington, Ky.	Bedstead	June 5, 1860.
	Jenkins, T. H., and James H. Deming. (See Jackman, Humphrey, ass'r.)			
27985	Jenkinson, James	Brooklyn, N. Y.	Hats, ventilators for	April 24, 1860.
26681	Jenks, Barton H., and William H. Tuttle	Philadelphia, Pa.	Gins, cotton	Jan. 3, 1860.
29283	Jenks, Barton H.	Philadelphia, Pa.	Chain for looms, pattern	July 24, 1860.
30324	Jenks, George C.	New York, N. Y.	Letter boxes	Oct. 9, 1860.
27055	Jenks, Robert W., jr.	Providence, R. I.	Railroad gates	Feb. 7, 1860.
27910	Jenks, R. W. jr., and F. A. Steere	Providence, R. I.	Cars, brakes for city railroad	April 17, 1860.
27131	Jennings, George W.	Boston, Mass.	Laundry and tailors' press	Feb. 14, 1860.
29435	Jennings, Lewis, assignor to self and R. Dickinson	Brooklyn, N. Y.	Cotton pickers	July 31, 1860.
28717	Jennison, John C., and Augustus Hale, assignors to Elias J. and Augustus Hale.	Foxcroft, Me.	Lamps	June 12, 1860.
	Jerrold, J. E., and J. J. McCormick. (See McCormick & Jerrold.)			
29494	Jewell, J. W., et al. (See McDaniel, Z., assignor)	Gilford, N. H.	Legs, artificial	Aug. 7, 1860.
28087	Jewett, Benjamin W.	Plainville, Ohio	Car brakes	May 1, 1860.
	Jewett, E. F.			
	Jewett & Root. (See Stanard, Walter W., ass'r.)			
	Jewett, S. S., and F. H. Root. (See Vedder, N. S., assignor.)			
28673	Jewett, Sherman S.	Buffalo, N. Y.	Stoves, cooking	June 12, 1860.
28674	Johnson, A., et al. (See Wood, J. P., ass'r.)			
27366	Johnson, Alired	Philadelphia, Pa.	Hydrants	June 12, 1860.
	Johnson, A. B.	Washington, Ind.	Rakes, horse hay	Mar. 6, 1860.
28968	Johnson, Adolphus B., Milton H. Vaughan, and J. Stinnett.	Clarksville, Ark.	Vehicles, detaching horses from	July 3, 1860.
26948	Johnson, A. F., assignor to A. B. Ely.	Shelby County, Tenn.		
26906	Johnson, A. F., assignor to A. B. Ely.	Boston, Mass.	Sewing machines	Jan. 24, 1860.
30478	Johnson, Albert F., assignor to A. B. Ely.	Boston, Mass.	Stitch	Jan. 24, 1860.
29975	Johnson, Charles F., and Charles F., jr., and William W. Johnson, C. P., and William Apperly. (See Apperly & Johnson.)	Boston, Mass.	Sewing machines	Oct. 23, 1860.
		Owego, N. Y.	Lock	Sept. 11, 1860.
28935	Johnson, Danforth	Chicago, Ill.	Cars, &c., springs for railway	Jan. 24, 1860.
30479	Johnson, D. A., and F. M. Gibson.	Chelsea, Mass.	Carriage wheels	Oct. 23, 1860.
27637	Johnson, D. S., et al. (See Love, Samuel W., ass'r.)			
27758	Johnson, Frank G., assignor to self and Daniel F. Tompkins.	Bellwood, Sag Harbor, N. Y.	Composition to prevent the depredations of insects	Mar. 27, 1860.
		Bellwood, Sag Harbor, N. Y.	Wind machine for pumping water	April 3, 1860.
27293	Johnson, Henry	Washington, D. C.	Lamps, vapor	Feb. 28, 1860.
27912	Johnson, Henry	Washington, D. C.	Lamps, vapor	April 17, 1860.

30578	Johnson, Henry.....	Washington, D. C.....	Burners, vapor.....	Nov. 6, 1860.
30681	Johnson, James.....	Garysburg, N. C.....	Carriage wheels, metallic hubs for.....	Nov. 20, 1860.
27295	Johnson, Jasper.....	Geneseo, N. Y.....	Blind operator.....	Feb. 28, 1860.
27357	Johnson, Jasper.....	Geneseo, N. Y.....	Gate.....	Mar. 6, 1860.
30970	Johnson, Jasper.....	Geneseo, N. Y.....	Hinge, butt.....	Dec. 18, 1860.
30825	Johnson, J. B., assignor to John Sparrow.....	Boston, Mass.....	Pumps.....	Dec. 4, 1860.
	Johnson, John, and Clark Tompkins. (See Tompkins & Johnson.)			
28490	Johnson, John.....	Naples, Ill.....	Planters, corn.....	May 29, 1860.
30326	Johnson, John.....	Biddeford, Me.....	Steam generators.....	Oct. 9, 1860.
27809	Johnson, Josee.....	New York, N. Y.....	Washing machine.....	April 10, 1860.
29599	Johnson, Josee.....	New York, N. Y.....	Clothes dryer.....	Aug. 14, 1860.
30551	Johnson, Josee, assignor to self and John Ward, jr.....	New York, N. Y.....	Clothes dryer.....	Oct. 30, 1860.
29379	Johnson, Joseph E.....	Brockport, N. Y.....	Smoothing irons, device for heating.....	July 31, 1860.
	Johnson, J. T., et al. (See Gelston, Johnson & Tompkins.)			
	Johnson, N., R. Emerson, and N. C. Travis. (See Travis, Johnson & Emerson.)			
30971	Johnson, Nelson.....	Jasper, N. Y.....	Water wheels.....	Dec. 18, 1860.
28280	Johnson, Pomeroy.....	Whitney's Point, N. Y.....	Felling trees.....	May 15, 1860.
28491	Johnson, Ross.....	Frederick, Md.....	Fastener, sash.....	May 29, 1860.
	Johnson, T. G., M. J. Whitmore, and R. F. Cook. (See Cook, R. F.)			
29381	Johnson, William, and H. Wansbrough.....	Cincinnati, Ohio.....	Stoves, cooking.....	July 31, 1860.
28583	Johnson, W. F.....	Wetumka, Ala.....	Cultivators, cotton.....	June 5, 1860.
29284	Johnson, W. F. and W. R.....	Wetumka, Ala.....	Bridle bits.....	July 24, 1860.
29380	Johnson, W. F., and J. Doyle.....	Wetumka, Ala.....	Blind-slat machine.....	July 31, 1860.
30226	{ Johnson, W. F., and J. Doyle.....	Philadelphia, Pa.....	Harvesters, sugar cane.....	Oct. 2, 1860.
27188	Johnson, William H., assignor to self and J. D. Bellab.....	Wetumka, Ala.....	Ploughs.....	Feb. 14, 1860.
30227	Johnson, William H.....	Richmond, Ark.....	Cotton cleaners.....	Oct. 2, 1860.
27225	Johnson, W. J.....	Richmond, Ark.....	Dishcloth holder.....	Feb. 21, 1860.
30480	Johnson, W. J.....	Newton Corner, Mass.....	Pumps.....	Oct. 23, 1860.
30631	Johnston, David.....	Eddyville, Iowa.....	Water elevators and carriers.....	Nov. 13, 1860.
29888	Johnston, James J., assignor to James R. Newell.....	Allegheny, Pa.....	Teaching children, device for.....	Sep. 4, 1860.
27638	Johnston, Samuel.....	West Shelby, N. Y.....	Corn huskers.....	Mar. 27, 1860.
	Jolley, Ryder & Carpenter. (See Ryder, Carpenter & Jolley.)			
28868	Jolly, Thomas J.....	Olean, Ind.....	Hay, loading.....	June 26, 1860.
30228	Jones, Frederick.....	McConnell's Grove, Ill.....	Fire-arm, breech loading.....	Oct. 2, 1860.
27546	Jones, Abraham H.....	Fallstington, Pa.....	Sewing machines.....	Mar. 20, 1860.
30325	Jones, Amos.....	Lebanon, N. H.....	Roof brackets.....	Oct. 9, 1860.
29175	Jones, Charles.....	Philadelphia, Pa.....	Stoves.....	July 17, 1860.
30735	Jones, Charles L., assignor to self and Wm. H. Tyree.....	Richmond, Va.....	Carpenter's clamp.....	Nov. 27, 1860.
	Jones & Comley, et al. (See Fetter, George, assignor.)			
27223	Jones, Daniel.....	Boston, Mass.....	Steering apparatus.....	Feb. 21, 1860.
	Jones, D. D., et al. (See Barth, G. M., assignor.)			
	Jones, D. J., and R. Stokes. (See Stokes & Jones.)			
27636	Jones, Edwin.....	Chester Cross Roads, Ohio.....	Harvesters.....	Mar. 27, 1860.
28138	Jones, Eleazor, and Cyrus L. Carter. (See Carter & Jones.)	Rose, N. Y.....	Water wheels.....	May 1, 1860.
27224	Jones, George H., and John Brown.....	New York, N. Y.....	Mills.....	Feb. 21, 1860.
28038	Jones, Gilbert Daniel.....	St. Louis, Mo.....	Wooden boxes, machine for finishing.....	April 24, 1860.
	Jones, Henry A., assignor to E. H. Dewey.....			

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
27056	Jones, James	Rochester, N. Y.	Hinge	Feb. 7, 1860.
27332	Jones, John B., assignor to self, S. W. Waldron, jr., and F. F. Hall.	Williamsburg, N. Y.	Lanterns	Feb. 28, 1860.
27911	Jones, J. B.	Brooklyn, E. D., N. Y.	Metal, sheet, machine for forming vessels of.	April 17, 1860.
27257	Jones, John M., assignor to self and H. O. Ames	New Orleans, La.	Sugar juices, skimmers for	Feb. 21, 1860.
30107	{ Jones, John M., and J. M. Charpentier, assignors to themselves and A. B. Charpentier.	New Orleans, La.	Furnaces, bagasse,	Sep. 18, 1860.
30477	{ Jones, John M., and Joseph M. Charpentier.	New Orleans, La.	Furnaces, bagasse.	Oct. 23, 1860.
1252	Jones, John L., assignor to D. D. Jones and A. McDowell.	Pattersonville, La.	Ridge for roofs, ornamental.	June 12, 1860.
30577	Jones, Jonathan L.	Slatington, Pa.	Bridges, truss	Nov. 6, 1860.
28281	Jones, M. M.	St. Louis, Mo.	Presses, cotton.	May 15, 1860.
29037	Jones, Samuel H., assignor to Henry W. and S. D. Smith.	Morrisville, N. Y.	Melodeons.	July 3, 1860.
27986	Jones, William D.	Jamaica Plains, Mo.	Moulding machines, method of adjusting the planes in.	April 24, 1860.
28376	Jordon, David C.	Dayton, Ohio.	Cultivators, hand	May 22, 1860.
28989	Joslin, William	Centre Port, N. Y.	Mills	July 3, 1860.
27987	Joyce, T., and G. N. Fairchild. (See Fairchild & Joyce.)	Cleveland, Ohio		
30408	Joyner, L. B.	Hilliardstown, N. C.	Ploughs, cotton-thinning	April 24, 1860.
27132	Judd, Edward M.	New Britain, Conn.	Fastener, window.	Oct. 16, 1860.
28869	Juengst, George.	New York, N. Y.	Sewing machines.	Feb. 14, 1860.
27450	Juengst, George.	New York, N. Y.	Sewing machines, shuttles for	June 26, 1860.
28182	Julier, Edward	Beverly, Ohio.	Cultivators	Mar. 13, 1860.
29600	Jullion, John Louis	Aberdeen, Great Britain.	Paper, preparation of	May 8, 1860.
28675	Jury, Hermann.	New York, N. Y.	Mattress, spring	Aug. 14, 1860.
29976	Justis, William W.	Nashville, Tenn.	Boilers, steam, apparatus for regulating the draft and preventing the explosion of.	June 12, 1860.
27810	Kaefer, Mathaus.	Genito, Va.	Tobacco, machine for straightening and pressing.	Sep. 11, 1860.
27988	Kakeles, Soligman.	New York, N. Y.	Paper, &c., chucks for cutting disks of.	April 10, 1860.
29382	Kalb, Jacob H.	New York, N. Y.	Lenses, fluid	April 24, 1860.
28584	Kaller, Hermann.	Charleston, S. C.	Lights, street	July 31, 1860.
29176	Kaller, Hermann.	Perry, Ill.	Grain binders	June 5, 1860.
27989	Kane, A. and N.	Perry, Ill.	Seeding machines.	July 17, 1860.
30945	Karcheski, Xavier, assignor to Lewis T. Valentine.	Newport, N. Y.	Harvesters.	April 24, 1860.
29285	Karr, A. M.	New York, N. Y.	Parchment, vegetable.	Dec. 18, 1860.
1218	Karr, Eliab. (See Wells, Samuel J., assignor.)	Mount Pleasant, Iowa.	Ploughs, mole.	July 24, 1860.
30682	Kase, Simon P.	Williamson county, Tenn.	Coffins	April 3, 1860.
27368	Kaufman, Daniel	Danville, Pa.	Cleaning rice, machine for	Nov. 20, 1860.
27547	Kaufman, John H.	Boiling Spring, Pa.	Elevator, hog	Mar. 6, 1860.
28039	Kavemann, Frederick, and Charles Bannert Hoerstmann, assignors to Frederick Kavemann.	Lisburn, Pa.	Cars, railroad.	Mar. 20, 1860.
29177	{ Kay, Henry, and Thomas Avery, jr.	Cincinnati, Ohio.	Ladders, extension.	April 24, 1860.
		Brooklyn, N. Y.	Copper vessels, planishing.	July 17, 1860.
		Morrisania, N. Y.		

29601	Kaye, J., and N. K. Wade, (See Wade & Kaye.)	Leroy, Ill.....	Ploughs, adjustable mole for.....	Aug. 14, 1860.
27598	Kazar, Lathrop.....	Mineral Point, Pa.....	Lathes, centring chuck for..	Mar. 20, 1860.
26995	Keane, John, assignor to self and F. H. Bartholomew.....	New York, N. Y.....	Closet, water.....	Jan. 31, 1860.
30579	Kearney, William.....	Union, N. J.....	Wrenches.....	Nov. 6, 1860.
27811	Keating, T. W., et al. (See Duff & Keating.)	Waterloo, N. Y.....	Washboard.....	April 10, 1860.
28088	Keech, Joseph.....	Cleveland, Ohio.....	Clocks vertically, device for adjusting.....	May 1, 1860.
30229	Keeler, J. F.....	Cleveland, Ohio.....	Locks, freight car.....	Oct. 2, 1860.
29383	Keeler, Joel F.....	New York, N. Y.....	Food, preserving.....	July 31, 1860.
30736	Keeler, William A.....	East Bridgewater, Mass.....	Leather, machine for skiving.....	Nov. 27, 1860.
29038	Keen, Samuel.....	Lynn, Mass.....	Bed and chair combined.....	July 3, 1860.
	Keene, George A., assignor to self and Seth D. Woodbury.			
27369	Keene, George W.....	Lynn, Mass.....	Boot and shoe heels.....	Mar. 6, 1860.
30946	Keller, Peter, assignor to self and D. A. Ulrick.....	Reading, Pa.....	Car brakes.....	Dec. 18, 1860.
30409	Kelberg, John W.....	Pittsburg, Pa.....	Churn.....	Oct. 16, 1860.
30881	Keller, John F.....	Greencastle, Pa.....	Water elevators and conveyors.....	Dec. 11, 1860.
27133	Keller, P. P., et al. (See Hunter, Jacob F., assignor.)	Moosop, Conn.....	Tufted work, manufacture of.....	Feb. 14, 1860.
26907	Kellermann, Emil.....	Mechanicsburg, Pa.....	Can covers, preserve.....	Jan. 24, 1860.
	Kelling, Charles L.....			
	Kelly & Adriance. (See Adriance & Clark, assignors.)			
	Kelly, Archibald, et al. (See Moore & Kelly.)			
29748	Kelly, John, assignor to self and T. Coate.....	West Milton, Ohio.....	Mill stones, machines for picking.....	Aug. 21, 1860.
27719	Kelly, John E.....	New York, N. Y.....	Saddles, riding.....	April 3, 1860.
27812	Kelly, John E.....	New York, N. Y.....	Mangers.....	April 10, 1860.
	Kelly, O. A., & A. Holman. (See Holman & Kelly.)			
27410	{ Kely, Gibbons L., and Thomas G. Harold, assignors to Richard H. Kely }	New York, N. Y.....	Curtain fixture.....	Mar. 6, 1830.
28585	Kely, Gibbons L.....	Brooklyn, N. Y.....	Curtains, window.....	June 5, 1860.
	Kely, G. L., et al. (See Hall, J. F., assignor.)	New York, N. Y.....		
	Kely, Gibbons L., and Thomas G. Harold. (See Harold & Kely.)			
27296	Kendall, J. J.....	Corinth, Miss.....	Looms.....	Feb. 28, 1860.
27134	Kendall, J. M.....	South Hardwich, Vt.....	Boring or mortising machines, feed motion for.....	Feb. 14, 1860.
	Kennaday, John H., and F. A. Goddard. (See Goddard, F. A., assignor.)			
27451	Kennedy, John P.....	Trenton, N. J.....	Gas retorts, clay.....	Mar. 13, 1860.
29794	Kennedy, Samuel.....	Hibbets, Ohio.....	Furnaces, apparatus for feeding saw dust to.....	Aug. 28, 1860.
29604	Kenny, Patrick.....	Providence, R. I.....	Valve gear for steam engines.....	Aug. 14, 1860.
28282	Kennish, William.....	London, England.....	Hydraulic motor.....	May 15, 1860.
29602	Kenyon, William.....	Steubenville, Ohio.....	Pipe cutter, gas.....	Aug. 14, 1860.
30972	Kepner, Solomon.....	North Coventry, Pa.....	Carriages, detaching horses from.....	Dec. 18, 1860.
26996	Kern, James M.....	Morgantown, Va.....	Washing machine.....	Jan. 31, 1860.
30067	Kern, William B.....	Middlebourne, Va.....	Straw cutters.....	Sept. 18, 1860.
28377	Kerr, Joseph W.....	Pittsburg, Pa.....	Gasaliers.....	May 22, 1860.
28757	Kerr, Samuel A.....	Arbor Hill, Va.....	Churn.....	June 19, 1860.
30144	Kersey, George W. and John J.....	Beartown, Pa.....	Planters, potato.....	Sept. 25, 1860.
28283	Ketchum, Richard.....	South Dansville, N. Y.....	Mowing and reaping machines.....	May 15, 1860.
29085	Ketchum, Cornelius E., and W. L. Hunt.....	Port Jefferson, N. Y.....	Vessels, centre board for, construction of.....	July 10, 1860.
30481	Kettler, Frederick.....	Milwaukee, Wis.....	Engines, rotary.....	Oct. 23, 1860.
	Keyser, Joseph. (See Temple, James, assignor.)			
	Kidder, B. A., et al. (See Hines, A. F., assignor.)			

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
30482	Kidder, Francis L.....	Brooklyn, N. Y.....	Vehicles, running gear of.....	Oct. 23, 1860.
30668	Kidder, Jerome.....	New York, N. Y.....	Electro-magnetic apparatus.....	Sept. 18, 1860.
28871	Kidder, Kimball P.....	Burlington, Vt.....	Beehives.....	June 26, 1860.
27813	Kile, Leonard.....	Williamsfield, Ohio.....	Tire, upsetting.....	April 10, 1860.
	Kilgore, William C., et al. (See Foote, Henry C., assignor.)			
26850	Kimball, Charles W.....	Springfield, Mass.....	Gauges, steam.....	Jan. 17, 1860.
28810	Kimball, Ebenezer A., assignor to self and Adrian L. Mellen.	Boston, Mass.....	Boilers, steam, alarm gauge for.....	June 19, 1860.
	Kimball, G. F. (See Mallett, F. W., assignor.)			
29495	Kimball, William H.....	Augusta, Me.....	Hand-cuff.....	Aug. 7, 1860.
29889	Kimball, William S.....	Rochester, N. Y.....	Presses, wine.....	Sept. 4, 1860.
29603	Kimbell, J. H., and A. McElroy. (See McElroy & Kimbell.)	Cambridge City, Ind.....	Stump extractor.....	Aug. 14, 1860.
	Kimmel, William and Daniel.....			
	Kimpler, C., and A. D. Merritt. (See Merritt & Kimpler.)			
26908	King, A. B. (See Nash, H. B., assignor.)	Hoboken, N. J.....	Valve gear for steam engines.....	Jan. 24, 1860.
28378	King, Julius.....	Bridgeport, Conn.....	Fire escape.....	May 22, 1860.
	King, Leonard.....			
	King, N., et al. (See Hinman & French.)			
	King, Rufus I., and James Greer. (See Greer & King.)			
29384	King, Samuel M.....	Lancaster, Pa.....	Sawing machine, steam cross-cut.....	July 31, 1860.
30605	King, Thomas, assignor to Ira A. Pulsipher.....	Troy, N. Y.....	Candles, machine for moulding.....	Nov. 6, 1860.
	King & Watson, of the firm of W. McCulley & Co. (See MacLardy, Robert.)			
28870	Kingshorn, Thomas and Robert.....	Morgan, Ohio.....	Cultivators.....	June 26, 1860.
	Kingsland, A. W. (See Wills, H. A., assignor.)			
28237	Kingsley, William, assignor to self and J. J. Fields.....	New York, N. Y.....	Car springs.....	May 8, 1860.
	Kinkend, G. B. (See McMurtry, John, assignor.)			
26682	Kinney, Henry R.....	Portsmouth, Ohio.....	Cultivators.....	Jan. 3, 1860.
29385	Kinzer, Jacob.....	Pittsburg, Pa.....	Sausage stuffer.....	July 31, 1860.
29795	Kinsey, G. S.....	Reading, Pa.....	Rakes, horse.....	Aug. 28, 1860.
30654	Kinzer, J., assignor to C. Adams.....	Pittsburg, Pa.....	Locks, door.....	Nov. 13, 1860.
27135	Kinzler, Charles, and Wilhelm Rosebrock.....	New York, N. Y.....	Sugar cutter.....	Feb. 14, 1860.
28183	Kinzler, Charles, and Wilhelm Rosebrock.....	New York, N. Y.....	Sugar loaf, apparatus for cutting or dividing.....	May 8, 1860.
29128	Kinzler, Charles, assignor to self and J. H. Voss.....	New York, N. Y.....	Boneblack, apparatus for washing.....	July 10, 1860.
30145	Kinzler, Charles.....	New York, N. Y.....	Sugar cutting machine.....	Sept. 25, 1860.
28284	Kirby, William A.....	Buffalo, N. Y.....	Harvesters.....	May 15, 1860.
30632	Kirk, John P.....	Austin, Texas.....	Chain link.....	Nov. 13, 1860.
26997	Kirk, Lewis.....	Reading, Pa.....	Brick machines.....	Jan. 31, 1860.
30581	Kirkham, William S.....	Brantford, Conn.....	Fastener, blind.....	Nov. 6, 1860.
30580	Kirkham, William S.....	Brantford, Conn.....	Locks.....	Nov. 6, 1860.
28379	Kirlin, A.....	New Boston, Ill.....	Seeding machines.....	May 22, 1860.
29386	Kirsch, Ernst, assignor to self and Ira Dikeman and Son.....	New Haven, Conn.....	Carriage bodies.....	July 31, 1860.
28586	Kitt, Balthasar.....	Cincinnati, Ohio.....	Bells, ringing.....	June 5, 1860.
	Kittle, S. P. (See Whitehead & Kittle, assignors.)			
30973	Kleeman, Moses.....	Columbus, Ohio.....	Glass cutters.....	Dec. 18, 1860.
30377	Kleinsteiber, Albert, assignor to W. Musgrove.....	Milwaukee, Wis.....	Lamps.....	Oct. 9, 1860.

30410	Kleinwort, Gustavus.....	Albion, Ill.....	Uterine supporters.....	Oct. 16, 1860.
29690	Knapp, J. W.....	Chester, N. Y.....	Window shutter stand.....	Sept. 4, 1860.
	Knecht, C. L., and J. H. Reighard. (See Reighard & Knecht.)			
27297	Knight, Edward C.....	Philadelphia, Pa.....	Cars, railroad, couches for.....	Feb. 28, 1860.
28184	Knight, Henry.....	Jersey City, N. J.....	Cement pipes, moulds for moulding.....	May 8, 1860.
30974	Knight, Joseph H.....	Newburyport, Mass.....	Shoe tacks.....	Dec. 18, 1860.
26819	Knight, Joseph I., assignor to self, Thomas Patterson, and James Lyndell.	Philadelphia, Pa.....	Planters, corn.....	Jan. 10, 1860.
29796	Knight, W. M.....	Buffalo, N. Y.....	Sad iron.....	Aug. 28, 1860.
28380	Knocke, Louis.....	Davenport, Iowa.....	Fire escape.....	May 22, 1860.
26683	Knoderer, Henry F. and Levi F.....	Chillicothe, Ohio.....	Composition for preventing incrustation of steam boilers.....	Jan. 3, 1860.
28089	Knorr, Ernst Rudolf.....	Washington, D. C.....	Courses and bearings on marine charts, method of finding.....	May 1, 1860.
27452	Knowles, Lucius J.....	Warren, Mass.....	Boilers, steam, safety feed apparatus for.....	Mar. 13, 1860.
	Knox, Charles. (See Branwhite, Charles, ass't.)			
27453	Knox, David, and Thomas Ditchburn.....	Lynn, Mass.....	Sole cutting machines.....	Mar. 13, 1860.
27990	Knox, Israel W.....	San Francisco, Cal.....	Amalgamators.....	April 24, 1860.
28381	Kober, Gottfried.....	New York, N. Y.....	Lozenges, machine for making.....	May 22, 1860.
27991	Koch, Augustus, and John F. Burgin. (See Burgin & Koch.)	New York, N. Y.....	Veneer cutting machines.....	April 24, 1860.
29891	Koch, George, and A. Stoeckel.....	South Adams, Mass.....	Paper, apparatus for trimming.....	Sept. 4, 1860.
27932	Kochler, Joseph, assignor to self and Heinrich Soltmann.....	New York, N. Y.....	Gear, head, for stopping runaway horses.....	April 17, 1860.
26909	Kohnle, Joseph.....	New York, N. Y.....	Piano forte action.....	Jan. 24, 1860.
28492	Kopfer, Permin.....	Fond du Lac, Wis.....	Tire, cooling and setting.....	May 29, 1860.
30230	Koppe, John.....	New York, N. Y.....	Harmonicon, glass or metal.....	Oct. 2, 1860.
	Korn, H., jr., et al. (See Black, Horatio N., assignor.)			
	Kossack, Cist, & Godfrey. (See Cist, Kossack & Godfrey.)			
30903	Kramer, A. J., assignor to self, Benjamin Reece, and N. W. Claflin.	Marion, Iowa.....	Planers, rotary, arrangement of parts in.....	Dec. 11, 1860.
27722	Kramer, Christian.....	Allegheny, Pa.....	Sausage stuffer.....	April 3, 1860.
30327	Krauss, Ernst F., and Louis Engler. (See Engler & Krauss.)	Forbestown, Cal.....	Gate and door swing.....	Oct. 9, 1860.
30975	Kroeber, F. W.....	Forbestown, Cal.....	Wrench.....	Dec. 18, 1860.
28587	Krom, Stephen.....	New York, N. Y.....	Buttons.....	June 5, 1860.
29496	Kubler, William F.....	New York, N. Y.....	Stud, shirt.....	Aug. 7, 1860.
29387	Kurth, Henry, Florian Dahis, and Charles Robitaille.....	Brooklyn, N. Y.....	Tobacco box.....	July 31, 1860.
29700	Kutt, F. C.....	Hackensack, N. J.....	Cars, railroad, stopping and starting.....	Aug. 21, 1860.
29388	Lacy, E. W.....	Oak Park, Va.....	Hemp brake.....	July 31, 1860.
28238	Ladd, Samuel J., assignor to H. L. Webster & Co.....	Providence, R. I.....	Metallic cup and stand.....	May 8, 1860.
29797	Lady, E. D.....	Nashville, Tenn.....	Straw cutters.....	Aug. 28, 1860.
	Laemmel, M., and O. Heinigke. (See Heinigke & Laemmel.)			
26998	Lafever, A., and George C. Barnes.....	Battle Creek, Mich.....	Lathes, back centre for.....	Jan. 31, 1860.
27337	La Forge, Samuel.....	Cleveland, Ohio.....	Leather goods, water proof.....	Feb. 28, 1860.
30328	La France, Truckson S.....	Elmira, N. Y.....	Engines, steam, pistons for.....	Oct. 9, 1860.
30329	Laird, Andrew J.....	Middletown, Pa.....	Valves of steam engines, arrangement for operating the.....	Oct. 9, 1860.
30737	Lake, Hiram J.....	Conquest, N. Y.....	Cultivators.....	Nov. 27, 1860.
27189	Lamb, Joseph, assignor to self and Richard Lamb.....	New York, N. Y.....	Sleds, portable.....	Feb. 14, 1860.
27022	Lamb, Richard, assignor to self and Joseph Lamb.....	New York, N. Y.....	Marble, manufacture of artificial.....	Jan. 31, 1860.
30069	Lamb, Salem T.....	New Washington, Ind.....	Clothes frame.....	Sept. 18, 1860.
30231	Lamb, Salem T.....	New Washington, Ind.....	Harvesting machines, cutting apparatus of.....	Oct. 2, 1860.
30330	Lamb, Salem T.....	New Washington, Ind.....	Harvesting machines.....	Oct. 9, 1860.
30411	Lamb, Salem T.....	New Washington, Ind.....	Churn dashers, fastening blades of.....	Oct. 16, 1860.

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
30482	Kidder, Francis L.	Brooklyn, N. Y.	Vehicles, running gear of.	Oct. 23, 1860.
30658	Kidder, Jerome.	New York, N. Y.	Electro-magnetic apparatus.	Sept. 18, 1860.
28871	Kidder, Kimball P.	Burlington, Vt.	Beehives.	June 26, 1860.
27813	Kile, Leonard.	Williamsfield, Ohio.	Tire, upsetting.	April 10, 1860.
	Kilgore, William C., et al. (See Foote, Henry C., assignor.)			
26850	Kimball, Charles W.	Springfield, Mass.	Gauges, steam.	Jan. 17, 1860.
26810	Kimball, Ebenezer A., assignor to self and Adrian L. Mellen.	Boston, Mass.	Boilers, steam, alarm gauge for.	June 19, 1860.
29495	Kimball, G. F. (See Mallett, F. W., assignor.)			
29889	Kimball, William H.	Augusta, Me.	Hand-cuff.	Aug. 7, 1860.
	Kimball, William S.	Rochester, N. Y.	Presses, wine.	Sept. 4, 1860.
29603	Kimbell, J. H., and A. McElroy. (See McElroy & Kimbell.)	Cambridge City, Ind.	Stump extractor.	Aug. 14, 1860.
	Kimmel, William and Daniel.			
26908	Kimpler, C., and A. D. Merritt. (See Merritt & Kimpler.)			
28378	King, A. B. (See Nash, H. B., assignor.)	Hoboken, N. J.	Valve gear for steam engines.	Jan. 24, 1860.
	King, Julius.	Bridgeport, Conn.	Fire escape.	May 22, 1860.
	King, Leonard.			
	King, N., et al. (See Hinman & French.)			
	King, Rufus I., and James Greer. (See Greer & King.)			
29384	King, Samuel M.	Lancaster, Pa.		
30605	King, Thomas, assignor to Ira A. Pulsipher.	Troy, N. Y.	Sawing machine, steam cross-cut.	July 31, 1860.
	King & Watson, of the firm of W. McCulley & Co. (See MacLardy, Robert.)		Candles, machine for moulding.	Nov. 6, 1860.
28870	Kingshorn, Thomas and Robert.	Morgan, Ohio.	Cultivators.	June 25, 1860.
	Kingsland, A. W. (See Wills, H. A., assignor.)			
28237	Kingsley, William, assignor to self and J. J. Fields.	New York, N. Y.	Car springs.	May 8, 1860.
	Kinkad, G. B. (See McMurtry, John, assignor.)			
26682	Kinney, Henry R.	Portsmouth, Ohio.	Cultivators.	Jan. 3, 1860.
29385	Kinzer, Jacob.	Pittsburg, Pa.	Sausage stuffer.	July 31, 1860.
29795	Kinsey, G. S.	Reading, Pa.	Rakes, horse.	Aug. 28, 1860.
30654	Kinger, J., assignor to C. Adams.	Pittsburg, Pa.	Locks, door.	Nov. 13, 1860.
27135	Kinzler, Charles, and Wilhelm Rosebrock.	New York, N. Y.	Sugar cutter.	Feb. 14, 1860.
28183	Kinzler, Charles, and Wilhelm Rosebrock.	New York, N. Y.	Sugar loaf, apparatus for cutting or dividing.	May 8, 1860.
29128	Kinzler, Charles, assignor to self and J. H. Voss.	New York, N. Y.	Boneblack, apparatus for washing.	July 10, 1860.
30145	Kinzler, Charles.	New York, N. Y.	Sugar cutting machine.	Sept. 25, 1860.
28284	Kirby, William A.	Buffalo, N. Y.	Harvesters.	May 15, 1860.
30632	Kirk, John P.	Austin, Texas.	Chain link.	Nov. 13, 1860.
26997	Kirk, Lewis.	Reading, Pa.	Brick machines.	Jan. 31, 1860.
30581	Kirkham, William S.	Brantford, Conn.	Fastener, blind.	Nov. 6, 1860.
30580	Kirkham, William S.	Brantford, Conn.	Locks.	Nov. 6, 1860.
28379	Kirlin, A.	New Boston, Ill.	Seeding machines.	May 22, 1860.
29386	Kirsch, Ernst, assignor to self and Ira Dikeman and Son.	New Haven, Conn.	Carriage bodies.	July 31, 1860.
28586	Kitt, Balthasar.	Cincinnati, Ohio.	Bells, ringing.	June 5, 1860.
	Kittle, S. P. (See Whitehead & Kittle, assignors.)			
30973	Kleeman, Moses.	Columbus, Ohio.	Glass cutters.	Dec. 18, 1860.
30377	Kleinsteiber, Albert, assignor to W. Musgrove.	Milwaukee, Wis.	Lamps.	Oct. 9, 1860.

30410	Kleinwort, Gustavus.....	Albion, Ill.....	Uterine supporters.....	Oct. 16, 1860.
29890	Knapp, J. W.....	Chester, N. Y.....	Window shutter stand.....	Sept. 4, 1860.
	Knecht, C. L., and J. H. Reighard. (See Reighard & Knecht.)			
27297	Knight, Edward C.....	Philadelphia, Pa.....	Cars, railroad, couches for.....	Feb. 28, 1860.
28184	Knight, Henry.....	Jersey City, N. J.....	Cement pipes, moulds for moulding.....	May 8, 1860.
30974	Knight, Joseph H.....	Newburyport, Mass.....	Shoe tacks.....	Dec. 18, 1860.
26819	Knight, Joseph I., assignor to self, Thomas Patterson, and James Lyndell.	Philadelphia, Pa.....	Planters, corn.....	Jan. 10, 1860.
29796	Knight, W. M.....	Buffalo, N. Y.....	Sad iron.....	Aug. 28, 1860.
28380	Knoche, Louis.....	Davenport, Iowa.....	Fire escape.....	May 22, 1860.
26683	Knoderer, Henry F. and Levi F.....	Chillicothe, Ohio.....	Composition for preventing incrustation of steam boilers.....	Jan. 3, 1860.
28089	Knorr, Ernst Rudolf.....	Washington, D. C.....	Courses and bearings on marine charts, method of finding.....	May 1, 1860.
27452	Knowles, Lucius J.....	Warren, Mass.....	Boilers, steam, safety feed apparatus for.....	Mar. 13, 1860.
27453	Knox, Charles. (See Branwhite, Charles, ass'r.)			
27990	Knox, David, and Thomas Ditchburn.....	Lynn, Mass.....	Sole cutting machines.....	Mar. 13, 1860.
28381	Knox, Israel W.....	San Francisco, Cal.....	Amalgamators.....	April 24, 1860.
27991	Kober, Gottfried.....	New York, N. Y.....	Lozenges, machine for making.....	May 22, 1860.
29891	Koch, Augustus, and John F. Burgin. (See Burgin & Koch.)	New York, N. Y.....	Veneer cutting machines.....	April 24, 1860.
27952	Koch, George, and A. Stoeckel.....	South Adams, Mass.....	Paper, apparatus for trimming.....	Sept. 4, 1860.
26909	Kochler, Joseph, assignor to self and Heinrich Soltmann.....	New York, N. Y.....	Gear, head, for stopping runaway horses.....	April 17, 1860.
28492	Kohnle, Joseph.....	New York, N. Y.....	Piano forte action.....	Jan. 24, 1860.
30230	Kopfer, Permin.....	Fond du Lac, Wis.....	Tire, cooling and setting.....	May 29, 1860.
	Koppe, John.....	New York, N. Y.....	Harmonicon, glass or metal.....	Oct. 2, 1860.
	Korn, H., jr., et al. (See Black, Horatio N., assignor.)			
	Kossack, Cist, & Godfrey. (See Cist, Kossack & Godfrey.)			
30903	Kramer, A. J., assignor to self, Benjamin Reec, and N. W. Clafin.	Marion, Iowa.....	Planers, rotary, arrangement of parts in.....	Dec. 11, 1860.
27722	Kramer, Christian.....	Allegheny, Pa.....	Sausage stuffer.....	April 3, 1860.
30327	Krauss, Ernst F., and Louis Engler. (See Engler & Krauss.)	Forbestown, Cal.....	Gate and door swing.....	Oct. 9, 1860.
30975	Kroeber, F. W.....	Forbestown, Cal.....	Wrench.....	Dec. 18, 1860.
28587	Krom, Stephen.....	New York, N. Y.....	Buttons.....	June 5, 1860.
29496	Kubler, William F.....	New York, N. Y.....	Stud, shirt.....	Aug. 7, 1860.
29387	Kurth, Henry, Florian Dabis, and Charles Robitaille.....	Brooklyn, N. Y.....	Tobacco box.....	July 31, 1860.
29700	Kutt, F. C.....	Hackensack, N. J.....	Cars, railroad, stopping and starting.....	Aug. 21, 1860.
29388	Lacy, E. W.....	Oak Park, Va.....	Hemp brake.....	July 31, 1860.
28238	Ladd, Samuel J., assignor to H. L. Webster & Co.....	Providence, R. I.....	Metallic cup and stand.....	May 8, 1860.
29797	Lady, E. D.....	Nashville, Tenn.....	Straw cutters.....	Aug. 28, 1860.
26998	Laemmel, M., and O. Heinigke. (See Heinigke & Laemmel.)			
27337	Lafever, A., and George C. Barnes.....	Battle Creek, Mich.....	Lathes, back centre for.....	Jan. 31, 1860.
30328	La Forge, Samuel.....	Cleveland, Ohio.....	Leather goods, water proof.....	Feb. 28, 1860.
30329	La France, Truckson S.....	Elmira, N. Y.....	Engines, steam, pistons for.....	Oct. 9, 1860.
30737	Laird, Andrew J.....	Middletown, Pa.....	Valves of steam engines, arrangement for operating the.....	Oct. 9, 1860.
27189	Lake, Hiram J.....	Conquest, N. Y.....	Cultivators.....	Nov. 27, 1860.
27022	Lamb, Joseph, assignor to self and Richard Lamb.....	New York, N. Y.....	Sleds, portable.....	Feb. 14, 1860.
30069	Lamb, Richard, assignor to self and Joseph Lamb.....	New York, N. Y.....	Marble, manufacture of artificial.....	Jan. 31, 1860.
30231	Lamb, Salem T.....	New Washington, Ind.....	Clothes frame.....	Sept. 18, 1860.
30330	Lamb, Salem T.....	New Washington, Ind.....	Harvesting machines, cutting apparatus of.....	Oct. 2, 1860.
30411	Lamb, Salem T.....	New Washington, Ind.....	Harvesting machines.....	Oct. 9, 1860.
			Churn dashers, fastening blades of.....	Oct. 16, 1860.

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
30482	Kidder, Francis L.....	Brooklyn, N. Y.....	Vehicles, running gear of.....	Oct. 23, 1860.
30668	Kidder, Jerome.....	New York, N. Y.....	Electro-magnetic apparatus.....	Sept. 18, 1860.
28871	Kidder, Kimball P.....	Burlington, Vt.....	Beehives.....	June 26, 1860.
27813	Kile, Leonard.....	Williamsfield, Ohio.....	Tire, upsetting.....	April 10, 1860.
26850	Kilgore, William C., et al. (See Foote, Henry C., assignor.)	Springfield, Mass.....	Gauges, steam.....	Jan. 17, 1860.
28810	Kimball, Charles W.....	Boston, Mass.....	Boilers, steam, alarm gauge for.....	June 19, 1860.
29495	Kimball, Ebenezer A., assignor to self and Adrian L. Mellen.			
29889	Kimball, G. F. (See Mallett, F. W., assignor.)	Augusta, Me.....	Hand-cuff.....	Aug. 7, 1860.
	Kimball, William H.....	Rochester, N. Y.....	Presses, wine.....	Sept. 4, 1860.
29603	Kimball, William S.....			
	Kimbell, J. H., and A. McElroy. (See McElroy & Kimbell.)	Cambridge City, Ind.....	Stump extractor.....	Aug. 14, 1860.
	Kimmel, William and Daniel.....			
26908	Kimpler, C., and A. D. Merritt. (See Merritt & Kimpler.)	Hoboken, N. J.....	Valve gear for steam engines.....	Jan. 24, 1860.
28378	King, A. B. (See Nash, H. B., assignor.)	Bridgeport, Conn.....	Fire escape.....	May 22, 1860.
	King, Julius.....			
	King, Leonard.....			
	King, N., et al. (See Hinman & French.)			
	King, Rufus I., and James Greer. (See Greer & King.)			
29384	King, Samuel M.....	Lancaster, Pa.....	Sawing machine, steam cross cut.....	July 31, 1860.
30605	King, Thomas, assignor to Ira A. Pulsipher.....	Troy, N. Y.....	Candles, machine for moulding.....	Nov. 6, 1860.
	King & Watson, of the firm of W. McCulley & Co. (See MacLardy, Robert.)			
28870	Kinghorn, Thomas and Robert.....	Morgan, Ohio.....	Cultivators.....	June 25, 1860.
28337	Kingsland, A. W. (See Wills, H. A., assignor.)	New York, N. Y.....	Car springs.....	May 8, 1860.
26682	Kingsley, William, assignor to self and J. J. Fields.....	Portsmouth, Ohio.....	Cultivators.....	Jan. 3, 1860.
29385	Kinkad, G. B. (See McMurtry, John, assignor.)	Pittsburg, Pa.....	Sausage stuffer.....	July 31, 1860.
29795	Kinney, Henry R.....	Reading, Pa.....	Rakes, horse.....	Aug. 28, 1860.
30654	Kinzer, Jacob.....	Pittsburg, Pa.....	Locks, door.....	Nov. 13, 1860.
27135	Kinsey, G. S.....	New York, N. Y.....	Sugar cutter.....	Feb. 14, 1860.
28183	Kinger, J., assignor to C. Adams.....	New York, N. Y.....	Sugar loaf, apparatus for cutting or dividing.....	May 8, 1860.
29128	Kinzler, Charles, and Wilhelm Rosebrock.....	New York, N. Y.....	Boneblack, apparatus for washing.....	July 10, 1860.
30145	Kinzler, Charles, assignor to self and J. H. Voss.....	New York, N. Y.....	Sugar cutting machine.....	Sept. 25, 1860.
28284	Kinzler, Charles.....	New York, N. Y.....	Harvesters.....	May 15, 1860.
30632	Kirby, William A.....	Buffalo, N. Y.....	Chain link.....	Nov. 13, 1860.
26997	Kirk, John P.....	Austin, Texas.....	Brick machines.....	Jan. 31, 1860.
30581	Kirk, Lewis.....	Reading, Pa.....	Fastener, blind.....	Nov. 6, 1860.
30580	Kirkham, William S.....	Brantford, Conn.....	Locks.....	Nov. 6, 1860.
28379	Kirkham, William S.....	Brantford, Conn.....	Seeding machines.....	May 22, 1860.
29386	Kirlin, A.....	New Boston, Ill.....	Carriage bodies.....	July 31, 1860.
28586	Kirsch, Ernst, assignor to self and Ira Dikeman and Son.....	New Haven, Conn.....	Bells, ringing.....	June 5, 1860.
	Kitt, Balthasar.....	Cincinnati, Ohio.....		
	Kittle, S. P. (See Whitehead & Kittle, assignors.)			
30973	Kleeman, Moses.....	Columbus, Ohio.....	Glass cutters.....	Dec. 18, 1860.
30377	Kleinsteiber, Albert, assignor to W. Musgrove.....	Milwaukee, Wis.....	Lamps.....	Oct. 9, 1860.

30410	Kleinwort, Gustavus.....	Albion, Ill.....	Uterine supporters.....	Oct. 16, 1860.
29890	Knapp, J. W.....	Chester, N. Y.....	Window shutter stand.....	Sept. 4, 1860.
	Knecht, C. L., and J. H. Reighard. (See Reighard & Knecht.)			
27297	Knight, Edward C.....	Philadelphia, Pa.....	Cars, railroad, couches for.....	Feb. 28, 1860.
28184	Knight, Henry.....	Jersey City, N. J.....	Cement pipes, moulds for moulding.....	May 8, 1860.
30974	Knight, Joseph H.....	Newburyport, Mass.....	Shoe tacks.....	Dec. 18, 1860.
26819	Knight, Joseph I., assignor to self, Thomas Patterson, and James Lyndell.	Philadelphia, Pa.....	Planters, corn.....	Jan. 10, 1860.
29796	Knight, W. M.....	Buffalo, N. Y.....	Sad iron.....	Aug. 28, 1860.
28380	Knoeke, Louis.....	Davenport, Iowa.....	Fire escape.....	May 22, 1860.
26683	Knoderer, Henry F. and Levi F.....	Chillicothe, Ohio.....	Composition for preventing incrustation of steam boilers.....	Jan. 3, 1860.
28089	Knorr, Ernst Rudolf.....	Washington, D. C.....	Courses and bearings on marine charts, method of finding.....	May 1, 1860.
27452	Knowles, Lucius J.....	Warren, Mass.....	Boilers, steam, safety feed apparatus for.....	Mar. 13, 1860.
27453	Knox, Charles. (See Branwhite, Charles, ass't.)			
27990	Knox, David, and Thomas Ditchburn.....	Lynn, Mass.....	Sole cutting machines.....	Mar. 13, 1860.
28381	Knox, Israel W.....	San Francisco, Cal.....	Amalgamators.....	April 24, 1860.
	Kober, Gottfried.....	New York, N. Y.....	Lozenges, machine for making.....	May 22, 1860.
27991	Koch, Augustus, and John F. Burgin. (See Burgin & Koch.)			
29891	Koch, George, and A. Stoeckel.....	New York, N. Y.....	Veneer cutting machines.....	April 24, 1860.
27952	Koch, Julius.....	South Adams, Mass.....	Paper, apparatus for trimming.....	Sept. 4, 1860.
26909	Koehler, Joseph, assignor to self and Heinrich Soltmann.....	New York, N. Y.....	Gear, head, for stopping runaway horses.....	April 17, 1860.
28492	Kohnle, Joseph.....	New York, N. Y.....	Piano forte action.....	Jan. 24, 1860.
30230	Kopfer, Permin.....	Fond du Lac, Wis.....	Tire, cooling and setting.....	May 29, 1860.
	Koppe, John.....	New York, N. Y.....	Harmonicon, glass or metal.....	Oct. 2, 1860.
30903	Korn, H., jr., et al. (See Black, Horatio N., assignor.)			
	Kossack, Cist, & Godfrey. (See Cist, Kossack & Godfrey.)			
27722	Kramer, A. J., assignor to self, Benjamin Reece, and N. W. Claflin.	Marion, Iowa.....	Planers, rotary, arrangement of parts in.....	Dec. 11, 1860.
30327	Kramer, Christian.....	Allegheny, Pa.....	Sausage stuffer.....	April 3, 1860.
30975	Krauss, Ernst F., and Louis Engler. (See Engler & Krauss.)			
28587	Kroeber, F. W.....	Forbestown, Cal.....	Gate and door swing.....	Oct. 9, 1860.
29496	Krom, Stephen.....	Forbestown, Cal.....	Wrench.....	Dec. 18, 1860.
29387	Kubler, William F.....	New York, N. Y.....	Buttons.....	June 5, 1860.
29700	Kurth, Henry, Florian Dahis, and Charles Robitaille.....	New York, N. Y.....	Stud, shirt.....	Aug. 7, 1860.
29388	Kutt, F. C.....	Brooklyn, N. Y.....	Tobacco box.....	July 31, 1860.
29238	Lacy, E. W.....	Hackensack, N. J.....	Cars, railroad, stopping and starting.....	Aug. 21, 1860.
29797	Ladd, Samuel J., assignor to H. L. Webster & Co.....	Oak Park, Va.....	Hemp brake.....	July 31, 1860.
	Lady, E. D.....	Providence, R. I.....	Metallic cup and stand.....	May 8, 1860.
26998	Laemmel, M., and O. Heinigke. (See Heinigke & Laemmel.)	Nashville, Tenn.....	Straw cutters.....	Aug. 28, 1860.
27337	Lafever, A., and George C. Barnes.....			
30328	La Forge, Samuel.....	Battle Creek, Mich.....	Lathes, back centre for.....	Jan. 31, 1860.
30329	Laird, Andrew J.....	Cleveland, Ohio.....	Leather goods, water proof.....	Feb. 28, 1860.
30737	Lake, Hiram J.....	Elmira, N. Y.....	Engines, steam, pistons for.....	Oct. 9, 1860.
27189	Lamb, Joseph, assignor to self and Richard Lamb.....	Middletown, Pa.....	Valves of steam engines, arrangement for operating the.....	Oct. 9, 1860.
27022	Lamb, Richard, assignor to self and Joseph Lamb.....	Conquest, N. Y.....	Cultivators.....	Nov. 27, 1860.
30069	Lamb, Salem T.....	New York, N. Y.....	Sleds, portable.....	Feb. 14, 1860.
30231	Lamb, Salem T.....	New York, N. Y.....	Marble, manufacture of artificial.....	Jan. 31, 1860.
30330	Lamb, Salem T.....	New Washington, Ind.....	Clothes frame.....	Sept. 18, 1860.
30411	Lamb, Salem T.....	New Washington, Ind.....	Harvesting machines, cutting apparatus of.....	Oct. 2, 1860.
		New Washington, Ind.....	Harvesting machines.....	Oct. 9, 1860.
		New Washington, Ind.....	Churn dashers, fastening blades of.....	Oct. 16, 1860.

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
30482	Kidder, Francis L.....	Brooklyn, N. Y.....	Vehicles, running gear of.....	Oct. 23, 1860.
30668	Kidder, Jerome.....	New York, N. Y.....	Electro-magnetic apparatus.....	Sept. 18, 1860.
28871	Kidder, Kimball P.	Burlington, Vt.....	Beehives.....	June 26, 1860.
27813	Kile, Leonard.....	Williamsfield, Ohio.....	Tire, upsetting.....	April 10, 1860.
	Kilgore, William C., <i>et al.</i> (See Foote, Henry C., assignor.)			
26850	Kimball, Charles W.....	Springfield, Mass.....	Gauges, steam.....	Jan. 17, 1860.
28810	Kimball, Ebenezer A., assignor to self and Adrian L. Mellen.	Boston, Mass.....	Boilers, steam, alarm gauge for.....	June 19, 1860.
29495	Kimball, G. F. (See Mallett, F. W., assignor.)			
29889	Kimball, William H.....	Augusta, Me.....	Hand-cuff.....	Aug. 7, 1860.
	Kimball, William S.....	Rochester, N. Y.....	Presses, wine.....	Sept. 4, 1860.
29603	Kimbell, J. H., and A. McElroy. (See McElroy & Kimbell.)			
	Kimmel, William and Daniel.....	Cambridge City, Ind.....	Stump extractor.....	Aug. 14, 1860.
	Kimpler, C., and A. D. Merritt. (See Merritt & Kimpler.)			
26908	King, A. B. (See Nash, H. B., assignor.)			
28378	King, Julius.....	Hoboken, N. J.....	Valve gear for steam engines.....	Jan. 24, 1860.
	King, Leonard.....	Bridgeport, Conn.....	Fire escape.....	May 22, 1860.
	King, N., <i>et al.</i> (See Hinman & French.)			
29384	King, Rufus I., and James Greer. (See Greer & King.)			
30605	King, Samuel M.....	Lancaster, Pa.....	Sawing machine, steam cross-cut.....	July 31, 1860.
	King, Thomas, assignor to Ira A. Pulsipher.....	Troy, N. Y.....	Candles, machine for moulding.....	Nov. 6, 1860.
	King & Watson, of the firm of W. McCulley & Co. (See MacLardy, Robert.)			
28870	Kinghorn, Thomas and Robert.....	Morgan, Ohio.....	Cultivators.....	June 26, 1860.
28337	Kingsland, A. W. (See Wills, H. A., assignor.)			
	Kingsley, William, assignor to self and J. J. Fields.....	New York, N. Y.....	Car springs.....	May 8, 1860.
	Kinkad, G. B. (See McMurtry, John, assignor.)			
26682	Kinney, Henry R.....	Portsmouth, Ohio.....	Cultivators.....	Jan. 3, 1860.
29385	Kinzer, Jacob.....	Pittsburg, Pa.....	Sausage stuffer.....	July 31, 1860.
29795	Kinsey, G. S.....	Reading, Pa.....	Rakes, horse.....	Aug. 28, 1860.
30654	Kinger, J., assignor to C. Adams.....	Pittsburg, Pa.....	Locks, door.....	Nov. 13, 1860.
27135	Kinzler, Charles, and Wilhelm Rosebrock.....	New York, N. Y.....	Sugar cutter.....	Feb. 14, 1860.
29183	Kinzler, Charles, and Wilhelm Rosebrock.....	New York, N. Y.....	Sugar loaf, apparatus for cutting or dividing.....	May 8, 1860.
29128	Kinzler, Charles, assignor to self and J. H. Voss.....	New York, N. Y.....	Boneblack, apparatus for washing.....	July 10, 1860.
30145	Kinzler, Charles.....	New York, N. Y.....	Sugar cutting machine.....	Sept. 25, 1860.
28284	Kirby, William A.....	Buffalo, N. Y.....	Harvesters.....	May 15, 1860.
30632	Kirk, John P.....	Austin, Texas.....	Chain link.....	Nov. 13, 1860.
26997	Kirk, Lewis.....	Reading, Pa.....	Brick machines.....	Jan. 31, 1860.
30581	Kirkham, William S.....	Brantford, Conn.....	Fastener, blind.....	Nov. 6, 1860.
30580	Kirkham, William S.....	Brantford, Conn.....	Locks.....	Nov. 6, 1860.
28379	Kirlin, A.....	New Boston, Ill.....	Seeding machines.....	May 22, 1860.
29386	Kirsch, Ernst, assignor to self and Ira Dikeman and Son.....	New Haven, Conn.....	Carriage bodies.....	July 31, 1860.
28586	Kitt, Balthasar.....	Cincinnati, Ohio.....	Bells, ringing.....	June 5, 1860.
	Kittle, S. P. (See Whitehead & Kittle, assignors.)			
30973	Kleeman, Moses.....	Columbus, Ohio.....	Glass cutters.....	Dec. 18, 1860.
30377	Kleinsteiber, Albert, assignor to W. Musgrove.....	Milwaukee, Wis.....	Lamps.....	Oct. 9, 1860.

30410	Kleinwort, Gustavus.....	Albion, Ill.....	Uterine supporters.....	Oct. 16, 1860.
29890	Knapp, J. W.....	Chester, N. Y.....	Window shutter stand.....	Sept. 4, 1860.
	Knecht, C. L., and J. H. Reighard. (See Reighard & Knecht.)			
27297	Knight, Edward C.....	Philadelphia, Pa.....	Cars, railroad, couches for.....	Feb. 28, 1860.
28184	Knight, Henry.....	Jersey City, N. J.....	Cement pipes, moulds for moulding.....	May 8, 1860.
30974	Knight, Joseph H.....	Newburyport, Mass.....	Shoe tacks.....	Dec. 18, 1860.
26819	Knight, Joseph I., assignor to self, Thomas Patterson, and James Lyndell.	Philadelphia, Pa.....	Planters, corn.....	Jan. 10, 1860.
29796	Knight, W. M.....	Buffalo, N. Y.....	Sad iron.....	Aug. 28, 1860.
28380	Knocke, Louis.....	Davenport, Iowa.....	Fire escape.....	May 22, 1860.
26683	Knoderer, Henry F. and Levi F.....	Chillicothe, Ohio.....	Composition for preventing incrustation of steam boilers.....	Jan. 3, 1860.
28089	Knorrt, Ernst Rudolf.....	Washington, D. C.....	Courses and bearings on marine charts, method of finding.....	May 1, 1860.
27452	Knowles, Lucius J.....	Warren, Mass.....	Boilers, steam, safety feed apparatus for.....	Mar. 13, 1860.
27453	Knox, Charles. (See Branwhite, Charles, ass't.)	Lynn, Mass.....	Sole cutting machines.....	Mar. 13, 1860.
27990	Knox, David, and Thomas Ditchburn.....	San Francisco, Cal.....	Amalgamators.....	April 24, 1860.
28381	Kober, Gottfried.....	New York, N. Y.....	Lozenges, machine for making.....	May 22, 1860.
27991	Koch, Augustus, and John F. Burgin. (See Burgin & Koch.)	New York, N. Y.....	Veneer cutting machines.....	April 24, 1860.
29891	Koch, George, and A. Stoeckel.....	South Adams, Mass.....	Paper, apparatus for trimming.....	Sept. 4, 1860.
27952	Koch, Julius.....	New York, N. Y.....	Gear, head, for stopping runaway horses.....	April 17, 1860.
26909	Koehler, Joseph, assignor to self and Heinrich Soltmann.....	New York, N. Y.....	Piano forte action.....	Jan. 24, 1860.
28492	Kohnle, Joseph.....	New York, N. Y.....	Tire, cooling and setting.....	May 29, 1860.
30230	Kopfer, Permin.....	Fond du Lac, Wis.....	Harmonicon, glass or metal.....	Oct. 2, 1860.
	Koppe, John.....	New York, N. Y.....		
	Korn, H., jr., et al. (See Black, Horatio N., assignor.)			
	Kossack, Cist, & Godfrey. (See Cist, Kossack & Godfrey.)			
30903	Kramer, A. J., assignor to self, Benjamin Reece, and N. W. Claflin.	Marion, Iowa.....	Planers, rotary, arrangement of parts in.....	Dec. 11, 1860.
27722	Kramer, Christian.....	Allegheny, Pa.....	Sausage stuffer.....	April 3, 1860.
30327	Krauss, Ernst F., and Louis Engler. (See Engler & Krauss.)	Forbestown, Cal.....	Gate and door swing.....	Oct. 9, 1860.
30975	Kroeber, F. W.....	Forbestown, Cal.....	Wrench.....	Dec. 18, 1860.
28587	Krom, Stephen.....	New York, N. Y.....	Buttons.....	June 5, 1860.
29496	Kubler, William F.....	New York, N. Y.....	Stud, shirt.....	Aug. 7, 1860.
29387	Kurth, Henry, Florian Dahls, and Charles Robitaille.....	Brooklyn, N. Y.....	Tobacco box.....	July 31, 1860.
29700	Kutt, F. C.....	Hackensack, N. J.....	Cars, railroad, stopping and starting.....	Aug. 21, 1860.
29388	Lacy, E. W.....	Oak Park, Va.....	Hemp brake.....	July 31, 1860.
28238	Ladd, Samuel J., assignor to H. L. Webster & Co.....	Providence, R. I.....	Metallic cup and stand.....	May 8, 1860.
29797	Lady, E. D.....	Nashville, Tenn.....	Straw cutters.....	Aug. 28, 1860.
26998	Laemmel, M., and O. Heinigke. (See Heinigke & Laemmel.)	Battle Creek, Mich.....	Lathes, back centre for.....	Jan. 31, 1860.
27337	Lafever, A., and George C. Barnes.....	Cleveland, Ohio.....	Leather goods, water proof.....	Feb. 28, 1860.
30328	La Forge, Samuel.....	Elmira, N. Y.....	Engines, steam, pistons for.....	Oct. 9, 1860.
30329	La France, Truckson S.....	Middletown, Pa.....	Valves of steam engines, arrangement for operating the.....	Oct. 9, 1860.
30737	Laird, Andrew J.....	Conquest, N. Y.....	Cultivators.....	Nov. 27, 1860.
27189	Lake, Hiram J.....	New York, N. Y.....	Sleds, portable.....	Feb. 14, 1860.
27022	Lamb, Joseph, assignor to self and Richard Lamb.....	New York, N. Y.....	Marble, manufacture of artificial.....	Jan. 31, 1860.
30069	Lamb, Richard, assignor to self and Joseph Lamb.....	New York, N. Y.....	Clothes frame.....	Sept. 18, 1860.
30231	Lamb, Salem T.....	New Washington, Ind.....	Harvesting machines, cutting apparatus of.....	Oct. 2, 1860.
30230	Lamb, Salem T.....	New Washington, Ind.....	Harvesting machines.....	Oct. 9, 1860.
30411	Lamb, Salem T.....	New Washington, Ind.....	Churn dashers, fastening blades of.....	Oct. 16, 1860.

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
30412	Lamb, Salem T.	New Washington, Ind.	Washing machines.	Oct. 16, 1860.
28382	Lamb, Thomas B.	Summitt, Mich.	Vise.	May 22, 1860.
30413	Lampman, H. (See Landers, George, and Henry Lampman.)	Aston, N. Y.	Separators, grain.	Oct. 16, 1860.
29701	Landers, George, and Henry Lampman.	West Cocalico, Pa.	Millstones, machines for dressing.	Aug. 21, 1860.
30483	Landes, Joseph, et al. (See Fuller, J. T., assignor.)	Lancaster, Pa.	Bolts, flour, screen for.	Oct. 23, 1860.
29288	Landis, Samuel K.	Baltimore, Md.	Rocking propeller.	July 24, 1860.
30655	Landis, David.	Brockfort, N. Y.	Harvesters.	Nov. 13, 1860.
27454	Landon, Edmund.	Boston, Mass.	Roasters, coffee.	Mar. 13, 1860.
27594	Landon, Frederick, assignor to Byron E. Huntley, John M. Bowman, and Charles and Lafayette Silliman.	Northampton, Mass.	Sewing machines.	Mar. 20, 1860.
30326	Landstrom, Reinhold.	Northampton, Mass.	Valves of oscillating engines.	Dec. 4, 1860.
29179	Langdon, L. W.	Hazelton, Iowa.	Broom.	July 17, 1860.
28990	Langdon, Thomas, and Christian Weitman.	Fall River, Mass.	Car brakes, railroad.	July 3, 1860.
28285	Langford, Charles F.	Troy, Ohio.	Shoemakers' float.	May 15, 1860.
27913	Langley, F. L.	South Framingham, Mass.	Awls, shoemakers'.	April 17, 1860.
27455	Lane, Benjamin I.	Boston, Mass.	Water gauges and other purposes, method of testing hollow spheres for.	Mar. 13, 1860.
27725	Lane, George W.	Boston, Mass.	Boilers, steam, apparatus for testing hollow floats for.	April 3, 1860.
26771	Lane, Howe, Adams & Hoyt. (See Hoyt, F. A., assignor.)	Lockport, Ill.	Ploughs, mole of drain.	Jan. 10, 1860.
29178	Lane, I. M., et al. (See Miller, Aaron, assignor.)	Freeport, Ill.	Separators, grain, governor attachment for.	July 17, 1860.
30484	Lane, John.	Chappaqua, N. Y.	Jacks, lifting.	Oct. 23, 1860.
29350	Lane, Lorenzo D.	Brooklyn, N. Y.	Steam trap.	Jan. 24, 1860.
30331	Lane, Major A., et al. (See Miham, Patrick, assignor.)	New York, N. Y.	Washing machine.	Oct. 9, 1860.
27548	Lane, M. A., and P. Miham. (See Miham & Lane)	Providence, R. I.	Lubricators.	Mar. 20, 1860.
28758	Lane, William J.	New York, N. Y.	Blowers.	June 19, 1860.
30633	Lapham, Allen, assignor to self and C. A. Durgin.	New York, N. Y.	Fire escapes.	Nov. 13, 1860.
26851	Lapham, Andrew F.	Thibodeaux, La.	Sugar pans, evaporators for.	Jan. 17, 1860.
27639	Larcher, E. B. and E. M., and D. C. Hitchcock. (See Hitchcock & Larcher.)	Cohocton, N. Y.	Carriage brake, self-acting.	Mar. 27, 1860.
26772	Larcker, Edwin B.	Newark, N. J.	Printing presses, apparatus to feed paper to.	Jan. 10, 1860.
29977	Larkin, John.	Brooklyn, N. Y.	Grate bars.	Sept. 11, 1860.
26999	Larned, H. S., and E. S. Taylor. (See Taylor & Larned.)	Northville, N. Y.	Printing press.	Jan. 31, 1860.
30976	Larowe, Albertus.	Weedsport, N. Y.	Locomotive engines, exhaust pipes of.	Dec. 18, 1860.
29695	Larter, Robert, jr.	Newark, Mo.	Carriage springs.	Aug. 14, 1860.
27190	Lasher, Daniel.	Philadelphia, Pa.	Hydro-carbon vapor for illumination, use of.	Feb. 14, 1860.

29702	Lauth, Bernard.....	Pittsburg, Pa.....	Iron bars, &c., rolling.....	Aug. 21, 1860.
28872	Lavally, George, Jr.....	Champlain, N. Y.....	Cars, railroad, coupling.....	June 23, 1860.
27814	Laveen, Marcus.....	Moorefield, Va.....	Fly brush or fan.....	April 10, 1860.
30886	Lavelly, William S., and James M. Cooper. (See Ellis, Josiah, assignor.)	New York, N. Y.....	Wagon, road.....	Dec. 11, 1860.
29286	Lawrence, James W., assignor to Brewster, Lawrence & Britton.	Hookstown, Pa.....	Cornstalks, machine for shocking.....	July 24, 1860.
28873	Lawson, O. L., assignor to New York Car and Steamboat Gas Company.	New York, N. Y.....	Gas holders, portable.....	June 25, 1860.
29497	Lawyer, William S.....	Gratiot, Ohio.....	Seeding machines.....	Aug. 7, 1860.
30606	Layman, Lewis, assignor to E. P. Whitney.	Westfield, N. Y.....	Locks.....	Nov. 6, 1860.
27057	Lazear, H. Y., and R. K. Cavanaugh. (See Cavanaugh & Lazear.)	New York, N. Y.....	Motion, converting rotary into reciprocating rectilinear.....	Feb. 7, 1860.
29703	Lazelle, William H.....	Jackson, Tenn.....	Surveyors' levelling instrument.....	Aug. 21, 1860.
28588	Lea, Lorenzo.....	New York, N. Y.....	Cocks, pull.....	June 5, 1860.
27549	Leach, George.....	Lewistown, Me.....	Weather strip for doors, &c.....	Mar. 20, 1860.
27550	Leach, J. D., and S. Hutchings. (See Hutchings & Leach.)	East Wareham, Mass.....	Forging machine.....	Mar. 20, 1860.
30634	Leach, Phineas.....	Melrose, Mass.....	Sewing machines.....	Nov. 13, 1860.
23584	Leach, William T.....	Malden, Mass.....	Anchor shackle, second.....	Jan. 3, 1860.
29704	Leake, Robert, jr., and Joseph Lockett. (See Shields, William, assignor.)	Springfield, Ill.....	Cultivators.....	Aug. 21, 1860.
28286	Leavitt, Rufus.....	Mount Carrel, Ill.....	Cattle, breachy, apparatus for.....	May 15, 1860.
29978	Leavitt, Thomas.....	New York, N. Y.....	Railroads.....	Sept. 11, 1860.
27914	Leavitt, Thomas, and E. P. Furlong. (See Furlong & Leavitt.)	Boston, Mass.....	Steam trap.....	April 17, 1860.
28383	Le Baron, H. G., et al. (See Hood, Otis, jr., assignor.)	Galesburg, Ill.....	Planters, corn.....	May 22, 1860.
30070	Leber, Lewis.....	Galesburg, Ill.....	Water from wells, &c., method of raising.....	Sept. 18, 1860.
28676	Ledy, John P., and William Boyers.....	Bolivar, Ohio.....	Metal, sheet, machine for forming cornices of.....	June 12, 1860.
28874	Lee, Benjamin F.....	Bolivar, Ohio.....	Post hole digger.....	June 23, 1860.
26685	Lee, Daniel.....	Burlington, Mich.....	Paints, composition for mixing with.....	Jan. 3, 1860.
29389	Lee, James, and G. H. Sealey. (See Sealey & Lee.)	Blakely, Ga.....	Cultivators.....	July 31, 1860.
28991	Lee, Joel.....	Blakely, Ga.....	Bale ties, cotton.....	July 3, 1860.
30738	Lee, Joel.....	Philadelphia, Pa.....	Furnaces, hot air.....	Nov. 27, 1860.
28493	Lee, John.....	New York, N. Y.....	Heating apparatus, steam.....	May 29, 1860.
26910	Lee, John, and C. B. Hurxthal. (See Hurxthal & Lee.)	Woodstock, Va.....	Lamps.....	Jan. 24, 1860.
30415	Lee, John, and C. B. Hurxthal. (See Hurxthal & Lee.)	Newark, N. J.....	Gas regulators.....	Oct. 16, 1860.
29498	Lee, Uri.....	Edgefield, S. C.....	Bedstead.....	Aug. 7, 1860.
28494	Lee, Z. W. and E. D.....	Reading, Pa.....	Washing machine.....	May 29, 1860.
27595	Lee, Z. W. and E. D.....	Jacksonville, Ill.....	Stoves, gas.....	Mar. 20, 1860.
29651	Leeds, Joseph.....	Brooklyn, N. Y.....	Paint can.....	Aug. 14, 1860.
29180	Leeds, Lewis W., and Calvert Vaux.....	Cincinnati, Ohio.....	Hoisting apparatus.....	July 17, 1860.
	Leedy, John K.....			
	Leedy, J. K., and J. W. Palmer. (See Palmer & Leedy.)			
	Leffingwell, John G.....			
	Leibrandt & McDowell. (See Smith & Brown, assignors.)			
	Leigh, John.....			
	Leigtheiser, A.....			
	Leland, E. A., assignor to self and Stephenson & Tompkins.			
	Leland, Edwin A., assignor to self and John Benson.....			
	Leland, James and John, and L. Brown. (See Brown & Leland.)			
	Lemman, John.....			

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
28185	Lemman, Martin R.....	Columbus, Miss.....	Hat bodies, machinery for felting.....	May 8, 1860.
29499	Lemmon, B. F.....	New Albany, Ind.....	Engines, steam, condensers for.....	Aug. 7, 1860.
27815	Lemon, John K.....	Toledo, Ohio.....	Scaffold, builders'.....	April 10, 1860.
25913	Leonard, Ira.....	Lowell, Mass.....	Table mats.....	Jan. 24, 1860.
30071	Leonard, Samuel.....	Bridgewater, Mass.....	Spokeshave.....	Sept. 18, 1860.
30232	Leshner, Henry S.....	Brooklyn, N. Y.....	Diaper pins.....	Oct. 2, 1860.
25686	Lester, Moses W., and Max Hjortsberg.....	Chicago, Ill.....	Heating and ventilating buildings, apparatus for.....	Jan. 3, 1860.
33485	Letellier, Francis. (See Letellier, Joseph F., assignor.)	Grand Rapids, Mich.....	Valves, steam.....	Oct. 23, 1860.
27723	Letellier, Joseph F., assignor to Francis Letellier.....	Wythesville, Va.....	Fire-arm, breech-loading.....	April 3, 1860.
29979	Letort, James, and H. S. Mathews.....	New Orleans, La.....	Cement.....	Sept. 11, 1860.
28875	Letourneur, Pierre A.....	Philadelphia, Pa.....	Desulphurizing ores and coal.....	June 26, 1860.
29390	Letterman, William H.....	Burlington, Mich.....	Fruit-drying apparatus.....	July 31, 1860.
28718	Lewis, Arba C.....	Philadelphia, Pa.....	Valves for steam engines, slide.....	June 12, 1860.
26588	Lewis, Enos M., assignor to self and George Williams.....	Moreau Station, N. Y.....	Milk-pan rack.....	Jan. 3, 1860.
30582	Lewis, George B.....	Elizabeth, N. J.....	Sails to ship's yards, attaching.....	Nov. 6, 1860.
29086	Lewis, John K.....	Rising Sun, Ind.....	Scaffolds, supporting.....	July 10, 1860.
29344	Lewis, Nathan C., jr., assignor to self and Edwin Bruce.....	Boston, Mass.....	Boots and shoes.....	July 24, 1860.
29500	Lewis, N. C.....	Boston, Mass.....	Rolling blanks, machine for.....	Aug. 7, 1860.
27726	Lewis, Thomas.....	Malden, Mass.....	Sugar holder and distributor.....	April 3, 1860.
26949	Lewis, William, assignor to M. J. Drummond.....	Brooklyn, N. Y.....	Belts, method of attaching scabbards to.....	Jan. 24, 1860.
28876	Lewis, William and William H.....	New York, N. Y.....	Photographic baths.....	June 23, 1860.
25687	Leyden, Austin.....	Atlanta, Ga.....	Sewing machines.....	Jan. 3, 1860.
28877	Leyden, Austin.....	Atlanta, Ga.....	Sewing machines.....	June 26, 1860.
30925	Leyfert, McManus & Co. (See McCarty, John, assignor.)	Philadelphia, Pa.....	Button holes, apparatus for cutting.....	Dec. 18, 1860.
27411	Leyoldt, Frederick C.....	Erie, Pa.....	Car springs.....	Mar. 6, 1860.
28438	Liddell, Walter J. F., assignor to self and Benj. Hershey.....	New York, N. Y.....	Paper file.....	May 22, 1860.
27915	Liebenroth, Adolphus, assignor to self and Iwan Van Auw.....	Mobile, Ala.....	Railway rails and wheels, testing the wear of.....	April 17, 1860.
27226	Liernur, Charles T.....	New York, N. Y.....	Plano-fortes, grand.....	Feb. 21, 1860.
28156	Lighte, Ferdinand C.....	Cold Spring, Ky.....	Fasteners, door.....	May 8, 1860.
29892	Lightfoot, John.....	Bucyrus, Ohio.....	Bedstead spring.....	Sept. 4, 1860.
1189	Lightner, D. R.....	Philadelphia, Pa.....	Fire dogs..... (Design)	Jan. 10, 1860.
1194	Lillagore, Theodore W., assignor to Savery & Co.....	Philadelphia, Pa.....	Fire dogs..... (Design)	Jan. 24, 1860.
1220	Lillagore, Theodore W., assignor to Savery & Co.....	Philadelphia, Pa.....	Fire dogs..... (Design)	April 3, 1860.
1221	Lillagore, Theodore W., assignor to Savery & Co.....	Philadelphia, Pa.....	Fire dogs..... (Design)	April 3, 1860.
1222	Lillagore, Theodore W., assignor to Savery & Co.....	Philadelphia, Pa.....	Fire dogs..... (Design)	April 3, 1860.
1223	Lillagore, Theodore W., assignor to Savery & Co.....	Philadelphia, Pa.....	Fire dogs..... (Design)	April 3, 1860.
1224	Lillagore, Theodore W., assignor to Savery & Co.....	Philadelphia, Pa.....	Fire dogs..... (Design)	April 3, 1860.
1225	Lillagore, Theodore W., assignor to Savery & Co.....	Philadelphia, Pa.....	Fire dogs..... (Design)	April 3, 1860.
33414	Lilley, William. (See Stevier, Robert William, assignor.)	Philadelphia, Pa.....	Straw cutters.....	Oct. 16, 1860.
29501	Lilly, John H.....	Bardstown, Ky.....	Water wheels.....	Aug. 7, 1860.
	Lincoln, George S., & Co. (See Pratt, Francis A.)	San Francisco, Cal.....		
	Lind, Adolphus.....			

29502	Lindeman, Herman.....	New York, N. Y.....	Plano-forte.....	Aug. 7, 1860.
	Lindhelm, Apple & Bear. (See Apple, Lindhelm & Bear.)			
28090	Lindsay, George.....	Petersburg, Va.....	Pumps.....	May 1, 1860.
29287	Lindsay, John Parker.....	New York, N. Y.....	Cartridge.....	July 24, 1860.
30332	Lindsay, John Parker.....	New York, N. Y.....	Fire-arms, locks for.....	Oct. 9, 1860.
30882	Lindsay, Stephen A.....	Unionville, Md.....	Harvesters, rakes for.....	Dec. 11, 1860.
	Lindsey, Alexander, <i>et al.</i> (See Broughton, Albert, assignor.)			
27865	Lindsey, Thomas, assignor to self and J. H. Beidler.....	Lincoln, Ill.....	Seeding machine.....	April 10, 1860.
29436	Lindsley, Isaac, assignor to self and Daniel F. Tompkins.....	Providence, R. I.....	Cigars.....	July 31, 1860.
29503	Lindsley, Isaac.....	Providence, R. I.....	Gold chains, making.....	Aug. 7, 1860.
27227	Lippincott, John.....	Pittsburg, Pa.....	Axes, manufacture of.....	Feb. 21, 1860.
27992	Lippman, Adolphus.....	New York, N. Y.....	Fire escape.....	April 24, 1860.
	Liquid Quartz Company of New York. (See Vanderburgh, George E., assignor.)			
28287	Litchfield, Henry T. (See Noyes, William H., assignor.)	New York, N. Y.....	Sewing machines.....	May 15, 1860.
29798	Little, George.....	Middle Branch, Ohio.....	Roaster, coffee.....	Aug. 28, 1860.
29980	Little, R.....	Covington, Ky.....	Fireplaces.....	Sept. 11, 1860.
30333	Littlefield, Calvin A., assignor to self and David Boyle.....	Albany, N. Y.....	Furnaces.....	Oct. 9, 1860.
	Littlefield, Dennis G.....			
	Littlefield, Wells & Langsdon. (See Langsdon, L. W., assignor.)			
27551	Littlepage, C. V.....	Austin, Texas.....	Millstone dress.....	Mar. 20, 1860.
30739	Livermore, Alonzo.....	Tremont, Pa.....	Chutes for river or canal navigation.....	Nov. 27, 1860.
28091	Livermore, Benjamin.....	Hartland, Vt.....	Drains, cement, construction of.....	May 1, 1860.
29087	Livezey, Joseph B.....	Clarkboro', N. J.....	Cultivators.....	July 10, 1860.
1311	Livingston, Marie L.....	New York, N. Y.....	Medallion of Washington Irving..... (Design)	Sept. 4, 1860.
30076	Livingston, William H.....	New York, N. Y.....	Saw frames, wood.....	Sept. 18, 1860.
30073	Livingston, William H.....	New York, N. Y.....	Saw frames, wood.....	Sept. 18, 1860.
30146	Livingston, W. H.....	New York, N. Y.....	Axes to handles, fastening.....	Sept. 25, 1860.
30584	Livingston, William H.....	New York, N. Y.....	Trees, device for sustaining.....	Nov. 6, 1860.
27993	Lloyd, John L.....	New York, N. Y.....	Removing coal, &c., bucket for.....	April 24, 1860.
27994	Lloyd, John L.....	Salem, N. J.....	Hoisting hay, &c., machine for.....	April 24, 1860.
	Lloyd, Thomas, and H. S. Root. (See Root & Lloyd.)			
	Lobdell, J. B., <i>et al.</i> (See Burr, D. Theodore, assignor.)			
	Lockett, Joseph, and Robert Leake, jr. (See Shields, William, assignor.)			
30740	Lockhart, Thomas S. and John A.....	Wellington, Mo.....	Ploughs.....	Nov. 27, 1860.
30233	Lockwood, De Witt C.....	Derby, Conn.....	Martingale rings.....	Oct. 2, 1860.
28092	Lockwood, Henry.....	New York, N. Y.....	Lock, door.....	May 1, 1860.
27058	Lockwood, John W.....	New York, N. Y.....	Head rest.....	Feb. 7, 1860.
	Lockwood, P., <i>et al.</i> (See Van Vleck, V., assignor.)			
	Lockwood, W. E. (See Schuyler, John F., assignor.)			
28384	Lockwood, William N.....	New Britain, Conn.....	Yoke fastenings, ox.....	May 22, 1860.
	Lodge, W. B., and J. L. Bridge. (See Bridge & Lodge.)			
29981	Loeb, Julius.....	New York, N. Y.....	Thread dressing machine.....	Sept. 11, 1860.
27456	Loft, John T.....	Brooklyn, N. Y.....	Shirts, skeleton, machine for covering the springs of.....	Mar. 13, 1860.
27640	Logan, John B.....	Blountville, Tenn.....	Andiron.....	Mar. 27, 1860.
28589	Logan, John W.....	Philadelphia, Pa.....	Sails, securing reef points of.....	June 5, 1860.
29894	Lombard, Daniel.....	Boston, Mass.....	Scouring rice, machines for.....	Sept. 4, 1860.
29893	Lombard, Daniel.....	Boston, Mass.....	Polishing rice, machines for.....	Sept. 4, 1860.
30489	Lombard, Daniel.....	Boston, Mass.....	Hulling machines, rice.....	Oct. 23, 1860.
27641	Lomont, F. T., and John Grojean.....	Masillon, Ohio.....	Reaping and mowing machines.....	Mar. 27, 1860.

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
28878	Londinsky, Leon	New York, N. Y.	Cap fronts, mode of binding.....	June 26, 1860.
30234	Long, Charles B.	Worcester, Mass.	Planing valve seats of steam engines.....	Oct. 2, 1860.
29938	Long, John M., assignor to self and Peter Black and R. Allsatter.	Hamilton, Ohio.	Harvesters	Sept. 4, 1860.
26911	Long, Robert H.	Philadelphia, Pa.	Engines steam, for propelling street passenger cars, arrangement of.	Jan. 24, 1860.
30644	Long, Robert H., and Joseph Grice. (See Grice & Long.)	Cincinnati, Ohio.	Street sweeping machines.....	Nov. 13, 1860.
27298	Longley, Servetus.....	Philadelphia, Pa.	Ships, construction of.....	Feb. 28, 1860.
28677	Loper, Richard F.	Minersville, Pa.	Fire-arms.....	June 12, 1860.
30583	Lord, James.....	Saco, Me.	Milking stool	Nov. 6, 1860.
1313	Loring, Levi	Blackwoodtown, N. J.	Sad iron.....	Sept. 25, 1860.
29391	Loring, Thomas	Rising Sun, Ind.	Cultivators	July 31, 1860.
29817	Lostutter, W. C., and S. Wolcott.....	Rochester, N. Y.	Bales, cotton, iron ties for.....	May 8, 1860.
29844	Loughborough, William S.	New York, N. Y.	Valve gear for steam engines.....	Aug. 28, 1860.
29088	Louis, Peter, assignor to self and Haran Wandel.....	New England Village, Mass.	Watch chains, hooks for.....	July 10, 1860.
27000	Lounsberry, J. R.	Fulton, N. Y.	Rakes, horse.....	Jan. 31, 1860.
28495	Lounsbury, Rodolphus, and Francis G. Willson.....	Ontario, N. Y.	Skates.....	May 29, 1860.
30683	Lovatt, John	Newark, N. J.	Clothing, spring hooks for.....	Nov. 20, 1860.
27137	Loveland, J. C.	Springfield, Vt.	Skates, spring	Feb. 14, 1860.
27136	Lovejoy, Daniel	Lowell, Mass.	Looms	Feb. 14, 1860.
	Lovelidge, Thomas.....	Philadelphia, Pa.		
	Lovett, C. E., and W. H. Warburton. (See Warburton & Lovett.)			
	Low, A. H., and W. H. Bishop. (See Bishop & Low.)			
	Low, I. B., and F. Smith. (See Windham, M. A., assignor.)			
28811	Low, John, assignor to Nathan Bruce.....	Clinton, Mass.	Dulcimers.....	June 19, 1860.
27724	Low, Peter.....	Cincinnati, Ohio.	Furnaces	April 3, 1860.
28536	Lowe, Samuel W., assignor to self, Charles Wirgman, and D. S. Johnson.	Philadelphia, Pa.	Lamps, vapor.....	May 29, 1860.
	Lowell Manufacturing Company. (See Ney, Elimer J., assignor.)			
28879	Lower, D. W. M.	Albia, Iowa.....	Seeding machines.....	June 26, 1860.
26689	Lowthorp, Francis C.	Trenton, N. J.	Pivot bearings.....	Jan. 3, 1860.
27457	Lowthorp, Francis C.	Trenton, N. J.	Bridges, &c., truss plate for securing chords, braces, &c., of..	Mar. 13, 1860.
26912	Lloyd, William	New York, N. Y.	Stereoscopic instrument.....	Jan. 24, 1860.
	Lucas & Co. (See Rehn, C. L., assignor.)			
	Ludlow, J. D., et al. (See Craig, Robert, assignor.)			
30147	Luedke, Ferdinand.....	New York, N. Y.	Beers	Sept. 25, 1860.
28188	Lufbery, George G.	New York, N. Y.	Paper bags, machine for making	May 8, 1860.
29392	Lufkin, Amos D.	Cleveland, Ohio.	Hides, preparing.....	July 31, 1860.
	Lulyer, A., et al. (See Burke, Edward, assignor.)			
	Lum, D. B., et al. (See Bellows, C. R., assignor.)			
27299	Lutz, William C.	Jacob's Church, Va.	Bedstead, folding	Feb. 28, 1860.
27816	Lyall, David C.	New York, N. Y.	Window sash, supporting.....	April 10, 1860.

27191	Lydell, James, <i>et al.</i> (See Knight, J. J., assignor.)	Pottsville, Pa.....	Coal, machinery for breaking.....	Feb. 14, 1860.
30179	Lykens, Isaac P., assignor to self and William Bickel.....	Argusville, N. Y.....	Roller and manure spreader, combined.....	Sept. 25, 1860.
27864	Lynd, Robert R., <i>et al.</i> (See Smith, Joseph, assignor.)	Buffalo, N. Y.....	Churn.....	April 10, 1860.
27228	Lyon, James W.....	Brooklyn, N. Y.....	Guards on gas cocks, machine for forming.....	Feb. 21, 1860.
27370	Lyon, James W.....	Brooklyn, N. Y.....	Plugs of stop cocks, machine for finishing.....	Mar. 6, 1860.
30336	Lyon, James W.....	Brooklyn, N. Y.....	Gas fittings, machine for finishing.....	Oct. 30, 1860.
29181	Lyon, John H.....	New York, N. Y.....	Lock, seal, for railway cars.....	July 17, 1860.
30487	Lyon, L. A., <i>et al.</i> (See Abbott, Hiram, assignor.)	Deep River, Conn.....	Bit stock.....	Oct. 23, 1860.
29606	Lyon, Wallace.....	Milton, Conn.....	Stump extractor.....	Aug. 14, 1860.
29607	Lyons, James B.....	Triune, Tenn.....	Scaffolds, portable.....	Aug. 14, 1860.
30488	Lytle, R. M.....	New York, N. Y.....	Bank notes, &c., style of engraving.....	Oct. 23, 1860.
27229	Macdonough, James.....	Rochester, N. Y.....	Last holders.....	Feb. 21, 1860.
30335	Mack, A. G.....	United States Navy.....	Ships' blocks, machine for stretching the straps of.....	Oct. 30, 1860.
26773	Mack, Eugene.....	New York, N. Y.....	Sinks, water closets, &c., ventilating.....	Jan. 10, 1860.
27138	Mackey, Walter G.....	San Francisco, Cal.....	Ships' holds from water, apparatus for freeing.....	Feb. 14, 1860.
30072	Mackenzie, John W.....	Batavia, N. Y.....	Separating and scouring grain, &c., machines for.....	Sept. 18, 1860.
26852	Mackey, David S.....	Pittsburg, Pa.....	Engines, oscillating steam.....	Jan. 17, 1860.
26853	Mackintosh, William S.....	Pittsburg, Pa.....	Engines, oscillating steam.....	Jan. 17, 1860.
27333	Mackintosh, William S., and J. Hemphill.....	Pittsburg, Pa.....	Glass bottles, tools for forming the necks and orifices of.....	Feb. 28, 1860.
27371	Mac Lardy, Robert, assignor to M. W. Watson and John McM. King, of the firm of W. McCully & Co.	Lawrence, Mass.....	Pots, coffee.....	Mar. 6, 1860.
29608	Magee, John.....	Lawrence, Mass.....	Stoves.....	Aug. 14, 1860.
29984	{ Magee, John, and William J. Towne.....	Newton, Mass.....	Hats, method of ventilating.....	Sept. 11, 1860.
30947	Maginnis, Arthur.....	Philadelphia, Pa.....	Stoves, gas.....	Dec. 18, 1860.
30855	Mahan, John L., assignor to D. Stuart and R. Peterson.....	Philadelphia, Pa.....	Harness trace.....	Dec. 4, 1860.
30827	Maber, Edmund, assignor to self and Marcus M. Wilcox.....	New York, N. Y.....	Valves, slide.....	Dec. 4, 1860.
29799	Mahoney, Thomas.....	Knoxville, Tenn.....	Beehives.....	Aug. 28, 1860.
30977	Maitland, Samuel.....	Fort Wayne, Ind.....	Gas burner regulator.....	Dec. 18, 1860.
29223	Mallerd, William.....	Bridgeport, Conn.....	Felloe machine.....	July 17, 1860.
27727	Mallett, F. W., assignor to G. F. Kimball.....	New Haven, Conn.....	Straw cutters.....	Apr. 3, 1860.
29652	Mallory, C. B.....	Fredonia, N. Y.....	Photographic medal.....	Aug. 14, 1860.
	Malone, Cameron & Story. (See Story, Jeremiah H., assignor.)	Waterbury, Conn.....		
29438	Maltby, Douglas F., assignor to Waterbury Button Co.....	Chicago, Ill.....	Ore separator.....	July 31, 1860.
27916	Maltby, Samuel, <i>et al.</i> (See Fowler, De Grasse & Thad-deus, assignors.)	Ionis, Mich.....	Eave troughs, machine for making.....	Apr. 17, 1860.
29093	Man, Samuel, assignor to Harry V. Man.....	New York, N. Y.....	Fork, table.....	May 1, 1860.
29182	Mann, Loomis.....	Springfield, Ill.....	Excavating machine.....	July 17, 1860.
29089	Mannheimer, William.....	Salem, Mass.....	Planing machine.....	July 10, 1860.
29800	Manning, Gilbert S.....	Rockford, Ill.....	Harvesters.....	Aug. 28, 1860.
30235	Manning, William N.....	Rockford, Ill.....	Harvesters.....	Oct. 2, 1860.
30234	Manny, Frederick H.....	Rockford, Ill.....	Winnowing machines.....	Oct. 9, 1860.
27642	Manny, Frederick H.....	Rockford, Ill.....	Harvesters.....	Mar. 27, 1860.
26774	Mauney, Pells.....	Waddams' Grove, Ill.....	Latch for gates.....	Jan. 10, 1860.
	Manross, Eli.....	Bristol, Conn.....		

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
29801	Mansfield, Martin H.	Ashland, Ohio.	Seeding machines.	Aug. 28, 1860.
27139	Manton, J. P., and H. A. Billings	Providence, R. I.	Rudders, hanging	Feb. 14, 1860.
27140	Maranville, H.	Clinton, Ohio.	Coin detectors	Feb. 14, 1860.
28385	Marcelin, Paul, and Earnest Eude	New Orleans, La.	Clarifying cane juice, apparatus for	May 22, 1860.
28678	Marcelin, Paul, and Earnest Eude	New Orleans, La.	Acid, sulphurous, manufacture of	June 12, 1860.
29895	Marcellus, Henry	Amsterdam, N. Y.	Mowing machines	Sept. 4, 1860.
29609	Marcher, Robert J. (See Barker, J. S., assignor.)	New York, N. Y.	Enameling picture frames, &c.	Aug. 14, 1860.
30856	Marcus, Tobias, et al. (See Angamar, E. H., assignor.)	Meriden, Conn.	Lamp chimneys, device for securing	Dec. 4, 1860.
30883	Maris, John J., et al. (See Hamer, James A., assignor.)	Monmouth, Ill.	Planters, corn	Dec. 11, 1860.
26690	Markham, George B.	Meads Mills, Mich.	Seeding machines	Jan. 3, 1860.
29896	Markham, George B.	Meads Mills, Mich.	Gates, flood, self-acting	Sept. 4, 1860.
28759	Markille, Thomas R.	Winchester, Ill.	Ploughs	June 19, 1860.
30416	Marks, Joseph	Boston, Mass.	Engines, &c., method of lubricating	Oct. 16, 1860.
29983	Marlow, George	Cincinnati, Ohio	Heating buildings, apparatus for	Sept. 11, 1860.
1341	Mars, J. H., and E. W. Smith. (See Smith & Mars.)	Lancaster, Pa.	Stove door	Nov. 13, 1860.
29295	Marsbank, J. D., assignor to self and W. McConkey	Natchez, Miss.	Cracker machine	July 24, 1860.
27728	Marsh, Cyrus, 2d.	Washington, D. C.	Lock and label sheath, compound	April 3, 1860.
30486	Marsh, Samuel W.	Roxbury, Mass.	Bins, grain	Oct. 23, 1860.
30074	Marsh, W. W.	Alton, Ill.	Grate bars	Sept. 18, 1860.
29705	Marshall, John R.	Marine, Ill.	Corn stalk cutters	Aug. 21, 1860.
29610	Marston, Charles	Viroqua, Wis.	Harvesters, grain	Aug. 14, 1860.
29296	Martin, George W.	West Moristonia, N. Y.	Submarine operator	July 24, 1860.
29992	Martin, James	Florence, Ala.	Water wheels	July 3, 1860.
30857	Martin, James, assignor to self and James E. Thomson	Toronto, Canada.	Locomotive engines, superheating steam for	Dec. 4, 1860.
29393	Martin, P.	New Orleans, La.	Hullers, cotton seed	July 31, 1860.
30788	Martin, Richard, assignor to self and Alexander Priestley	Philadelphia, Pa.	Paper, machines for damping	Nov. 27, 1860.
26915	Martin, Samuel G.	South Amboy, N. J.	Sails, reefing fore and aft	Jan. 24, 1860.
27300	Martin, William P.	Salem, Mass.	Leather, machines for finishing	Feb. 28, 1860.
28108	Martin, William P.	Salem, Mass.	Leather, machines for finishing	May 1, 1860.
1231	Martino, John, and James Horton, assignors to Stuart & Peterson.	Philadelphia, Pa.	Range, cooking	Apr. 10, 1860.
27552	Martino, J., and J. Horton. (See Horton & Martino.)	New York, N. Y.	Furnace, portable	Mar. 20, 1860.
26691	Masker, J. H.	Newark, N. J.	Turning lat blocks, machine for	Jan. 3, 1860.
28189	Mason, Alfred William John	New Orleans, La.	Drying sugar, machine for	May 8, 1860.
29290	Mason, Henry	Lancaster, Mass.	Presses, cotton	July 24, 1860.
29982	Mason, H. H., et al. (See Smith, David M., assignor.)	Berlin, N. H.	Saw teeth	Sept. 11, 1860.
26918	Mason, J. S., & Co. (See Diedrick & Slocum.)	Philadelphia, Pa.	Ventilation of bulk windows	Jan. 24, 1860.
	Mason, Samuel Rufus			
	Mason, Wm., and L. N. Fay. (See Fay & Mason.)			

27729	Mason, William D.	Jarrett's Depot, Va.	Fertilizers, machine for sowing.	Apr. 3, 1860.
29897	Mason, W. D.	Jarrett's Depot, Va.	Sowing machines.	Sept. 4, 1860.
27995	Massey, Michael.	Cleveland, Ohio.	Candle machines, construction of.	Apr. 24, 1860.
28386	Masten, John W.	Utica, Mich.	Planters, seed.	May 22, 1860.
28387	Masters, John	Waukegan, Ill.	Ditching machine.	May 22, 1860.
30237	Masterson, Levi J.	Newton, Mass.	Skate, self-adjusting.	Oct. 2, 1860.
29090	Masury, John W.	New York, N. Y.	Paint can.	July 10, 1860.
27059	Matheny, Chilton.	Greensburgh, Ind.	Spinning wheels, hand.	Feb. 7, 1860.
30741	Matheny, R. G., and L. R. Barnes	De Kalb, Miss.	Ploughs.	Nov. 27, 1860.
30828	Mathers, Ebenezer.	Fairmount, Va.	Pens, fountain.	Dec. 4, 1860.
30279	Mathews, H. S., and James Letort. (See Letort & Mathews.)	New York, N. Y.	Piano fortes.	Oct. 2, 1860.
27499	Mathushek, Frederick, assignor to self and Wellington Wells.	Rochester, N. Y.	Paddle wheels, feathering.	Mar. 13, 1860.
29802	Matteson, E., and L. D. Towsley. (See Towsley & Matteson.)	Brooklyn, N. Y.	Motion, rotary, converting reciprocating into.	Aug. 28, 1860.
28590	Matteon, Elisha.	New York, N. Y.	Galvanoplastic coating for the interior of metallic tubes.	June 5, 1860.
29437	Matthews, J. (See Muller, Charles, assignor.)	St. Louis, Mo.	Ordinance, repeating.	July 31, 1860.
27996	Matthews, J. A., assignor to self and S. H. Hemphill.	Antrim, Ohio.	Pumps.	Apr. 24, 1860.
27372	Matthews, Levi.	Linden, Vt.	Shutter operator.	Mar. 6, 1860.
27458	Mattocks, Edward.	Linden, Vt.	Shutter operator.	Mar. 13, 1860.
30978	Mauck, R. C., and John D. Heatwole. (See Heatwole & Mauck.)	Harrisonburg, Va.	Grain, machines for cleaning.	Dec. 18, 1860.
30075	Maupin, William G., and John B. Rooke	Portsmouth, Va.	Ships' air ports.	Sept. 18, 1860.
29611	Maurer, John.	New York, N. Y.	Bottles.	Aug. 14, 1860.
30636	Maxson, Nathan	Wilmington, Ohio.	Harvesters.	Nov. 13, 1860.
27062	Maxwell, F. G., and E. W. Bridging. (See Bridging & Maxwell.)	Allegheny, Pa.	Bel lows.	Feb. 7, 1860.
28001	Maxwell, Joseph B. and James A.	Baltimore, Md.	Composition for removing gum from machinery.	Apr. 24, 1860.
28496	May, Edwin.	Indianapolis, Ind.	Prisons, window grating for.	May 29, 1860.
28636	May, John M., and L. M. Gilmore. (See Gilmore, Lucius M., assignor.)	Winchester, Ohio.	Wagon brake, self acting.	June 5, 1860.
30447	May, William, assignor to self and Jerome De Bruin.	Winchester, Ohio.	Cultivators.	Oct. 16, 1860.
27001	Mayall, Thomas J.	Roxbury, Mass.	Rubber belting, machines for making.	Jan. 31, 1860.
27060	Mayall, Thomas J.	Boston, Mass.	Belting machine.	Feb. 7, 1860.
27301	Mayall, Thomas J.	Roxbury, Mass.	Razor strops.	Feb. 28, 1860.
27553	Mayall, Thomas J.	Roxbury, Mass.	Hose tubing.	Mar. 20, 1860.
27730	Mayall, Thomas J.	Roxbury, Mass.	Rubber belting, machines for making.	Apr. 3, 1860.
27818	Mayall, Thomas J.	Roxbury, Mass.	Slate, artificial.	Apr. 10, 1860.
27817	Mayall, Thomas J.	Roxbury, Mass.	Emery cloth, substitutes for.	Apr. 10, 1860.
28288	Mayall, Thomas J.	Roxbury, Mass.	Rubber hose, machines for making.	May 15, 1860.
28389	Mayall, Thomas J.	Roxbury, Mass.	Rubber hose tubing.	May 22, 1860.
28388	Mayall, Thomas J.	Roxbury, Mass.	Rubber hose, manufacture of.	May 22, 1860.
29898	Mayall, T. J.	Roxbury, Mass.	Gas tubes, manufacture of flexible.	Sept. 4, 1860.
30335	Mayall, Thomas J.	Roxbury, Mass.	Ordinance, breach-loading.	Oct. 9, 1860.

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
30417	Mayall, Thomas J.	Roxbury, Mass.	Tiles for flooring, manufacture of.	Oct. 16, 1860.
30637	Mayall, Thomas J.	Roxbury, Mass.	Rubber hose, India, machinery for making.	Nov. 13, 1860.
30742	Mayall, Thomas J.	Roxbury, Mass.	Ordnance.	Nov. 27, 1860.
29504	Maydole, James H.	Eaton, N. Y.	Harvesting machines.	Aug. 7, 1860.
	Mayhew, Elbridge G., et al. (See Smith, Elisha M., assignor.)			
27373	Mayhew, Hazel, jr. and Enoch.	Lancaster, Pa.	Preparing coal.	Mar. 6, 1860.
27554	Maynard, Edward.	Brooklyn, N. Y.	Curtains, &c., window, tassels for.	Mar. 20, 1860.
27731	Maynard, Edward.	Brooklyn, N. Y.	Carriage spring.	Apr. 3, 1860.
30537	Maynard, Edward.	Washington, D. C.	Fire arms, breach-loading.	Oct. 30, 1860.
30148	Maynard, Franklin.	Cambridge, Mass.	Shoe lasts.	Sept. 25, 1860.
29183	Mayne, P. T.	Keosauqua, Iowa.	Excavating and grading machine.	July 17, 1860.
28096	Mayo, William S.	New York, N. Y.	Ranges, &c., water back for.	May 1, 1860.
29706	McAfee, William.	Sommerville, Mich.	Gate.	Aug. 21, 1860.
29899	McAllister, William.	Gerry, N. Y.	Pressing cheese.	Sept. 4, 1860.
30638	McAllister, William.	Gerry, N. Y.	Cheese, manufacture of.	Nov. 13, 1860.
30490	McArthur, John.	Aurora, Ill.	Wells, &c., method of elevating water from.	Oct. 23, 1860.
26854	McBurney, Charles.	Roxbury, Mass.	Printing presses, apron for.	Jan. 17, 1860.
27819	McBurney, Charles.	Roxbury, Mass.	Hose tubing.	Apr. 10, 1860.
27643	McCain, Robert.	Rootstown, Ohio.	Washing machine.	Mar. 27, 1860.
27141	McCannon, Charles.	Albany, N. Y.	Iron, cast or wrought, constructing bars of.	Feb. 14, 1860.
30336	McCann, J., and H. Gortner. (See Gortner & McCann.)	New York, N. Y.	Boilers, steam, safety apparatus for.	Oct. 9, 1860.
26775	McCarthy, Charles.	New York, N. Y.	Wool, machinery for burring.	Jan. 10, 1860.
30448	McCarthy, E. J.	Philadelphia, Pa.	Horse shoe machine.	Oct. 16, 1860.
30656	McCarthy, John, assignor to Leyfert, McManus & Co.	Philadelphia, Pa.	Horse shoe machine.	Nov. 13, 1860.
30743	McCarthy, John, assignor to Leyfert, McManus & Co.	Philadelphia, Pa.		
28239	McClallan, William C. (See Wight, Henry, assignor.)	Victoria, Texas.	Planters, cotton seed.	Nov. 27, 1860.
	McClanahan, C. W.	New York, N. Y.	Lozenges, machines for cutting.	May 8, 1860.
27644	McClelland, William J., assignor to Earnest Greenfield.	Newark, Del.	Planters, seed.	Mar. 27, 1860.
	McClure, Hugh, et al. (See Cook, Isaac, assignor.)			
	McComber, Joel, et al. (See Brown, Stephen W., assignor.)			
	McConaughy, Thomas B.			
	McConkey, W., et al. (See Marshbank, I. D., assignor.)			
	McCool, I. J., et al. (See Lyuch, Edward, assignor.)			
25917	McCord, William.	Sing Sing, N. Y.	Presses, hay.	Jan. 24, 1860.
28880	McCord, William.	Sing Sing, N. Y.	Fire escape.	June 25, 1860.
29222	McCormick, J. J., and J. E. Jerrold, assignors to J. E. Jerrold and Eugene Beggs.	Paterson, N. J.	Car springs.	July 17, 1860.
28881	McCornick, Robert.	Greenville, Va.	Fruit, machine for stoning.	June 26, 1860.
27555	McCoun & Tibbits. (See Vedder, N. S., assignor.)	Altoona, Ill.	Tire, upsetting.	Mar. 20, 1860.
27998	McCown, George.	Grafton, Va.	Window sash.	April 24, 1860.
30744	McCoy, William Harrison, and John F. Muth.	Wheeling, Va.		
26855	McCoy, William J.	Cartersville, Ga.	Cultivators.	Nov. 27, 1860.
	McCray, Thomas H.	Tellico, Texas.	Presses.	Jan. 17, 1860.

27459	McCray, Thomas H.	Tellico, Texas.	Presses, cotton.	Mar. 13, 1860.
29612	McCulla, P. G.	Philadelphia, Pa.	Mills, grinding.	Aug. 14, 1860.
28000	McCullers, Matthew C.	Herndon, Ga.	Ploughs.	April 24, 1860.
29184	McCullers, Matthew C.	Herndon, Ga.	Ploughs.	July 17, 1860.
28882	McCulloch, John.	San Francisco, Cal.	Process of treating ores of gold, silver, and copper.	June 26, 1860.
27917	McCulloch, T. H.	Peoria, Ill.	Drying machine, grain.	April 17, 1860.
	McCunniff, John, and Joseph Codling, jr. (See Codling & McCunniff.)			
27999	McCurdy, James S.	Brooklyn, N. Y.	Sewing machines, stitch made by.	April 24, 1860.
28097	McCurdy, James S.	Brooklyn, N. Y.	Sewing machines.	May 1, 1860.
28993	McCurdy, James S.	Brooklyn, N. Y.	Sewing machines.	July 3, 1860.
30025	McDaniel, Z., assignor to self and J. W. Jewell.	Bowling Green, Ky.	Mill stones, hanging.	Sept. 11, 1860.
29289	McDermott, John.	Washington, D. C.	Thills to axles, couplings of.	July 24, 1860.
29707	McDill, T. W.	Oquawka, Ill.	Cultivators.	Aug. 21, 1860.
27460	McDougall, S. T.	New York, N. Y.	Gas, manufacture of.	Mar. 13, 1860.
	McDowell, A., et al. (See Jones, John L., assignor.)			
	McDowell & Leibrandt. (See Smith & Brown, assignors.)			
27002	{ McDowell, Malcolm, and Norman W. Wheeler.	New York, N. Y.	Locomotive engines and cars, combining.	Jan. 31, 1860.
27759	{ McElroy, Alexander and Robert B., assignors to Robert B. McElroy.	Brooklyn, N. Y.		April 3, 1860.
29505	McElroy, Alexander, and John H. Kinble.	Fox Lake, Wis.	Seeding machines.	Aug. 7, 1860.
27302	McEnally, Joseph B.	Clearfield, Pa.	Paper and letter file.	Feb. 28, 1860.
28190	McEvoy, C. A.	Richmond, Va.	Bolt for car seats.	May 8, 1860.
30539	McEvoy, C. A.	Richmond, Va.	Sabre bayonet fastening.	Oct. 30, 1860.
27918	McEwen, W. S., and N. A. Patterson.	Kingston, Tenn.	Overshoes and boots and shoes.	April 17, 1860.
28994	McFarlan, Nathaniel S.	Syracuse, N. Y.	Windows, attaching sash stops to.	July 3, 1860.
27003	McGaffey, Ives W.	Buffalo, N. Y.	Straw cutters.	Jan. 31, 1860.
28679	{ McGahey, W. T., and Henry C. Foote.	McGaheysville, Va.	Separators, grain.	June 12, 1860.
27919	{ McGehee, J. H. and H. O. Baker. (See Baker & McGill.)	Fredericktown, Ohio.	Separators, grain.	April 17, 1860.
28761	McGill, James, and H. O. Baker.	Philadelphia, Pa.	Gas burners.	June 19, 1860.
29394	McGlensley, James.	Allegheny, Pa.	Beehives.	July 31, 1860.
27645	McGonnigle, Matthias.	Logansport, Ind.	Car seats.	Mar. 27, 1860.
29185	McGrath, Hubler & Richards. (See Richards, J. C., ass'r.)	Franklin Furnace, Ohio.	Bale fastening, cotton.	July 17, 1860.
30077	McGregor, Samuel.	Salem, Mass.	Stables for horses, &c., safety.	Sept. 18, 1860.
26856	McIntire, Thomas.	Nashville, Tenn.	Ships, buoying.	Jan. 17, 1860.
28289	McIntire, William E.	Thomaston, Me.	Beer powder.	May 15, 1860.
28130	McKee, F., and W. G. Brown. (See Brown & McKee.)	Brooklyn, N. Y.	Ovens.	May 1, 1860.
	McKeen, T. Cato.			
	McKellar, John.			
	McKensie, Duncan, assignor to Mary Ann Elizabeth McKensie.			
	McKenzie, Mary Ann Elizabeth. (See McKenzie, Duncan, assignor.)			
	McKiernan, J., and M. C. Cogswell. (See Cogswell & McKiernan.)			
29900	McKinney, John.	Lansing, Mich.	Car couplings, railroad.	Sept. 4, 1860.
29803	McKnight, et al. (See Allen & Molyneux, assignors.)	Duncannon, Pa.	Planters, seed.	Aug. 28, 1860.
28591	McLaughlin, James.	Indianapolis, Ind.	Shingle machines.	June 5, 1860.
28883	McLean, James W., and Albert Gummer.	Indianapolis, Ind.	Lath machines.	June 26, 1860.
	McLean, James W., and A. Gummer.			

26694	Merrill, A. P., jr.	Natchez, Miss.	Hoop locks.	Jan. 3, 1860.
28392	Merrill, Ayers P., jr.	Natchez, Miss.	Bales, cotton, locks for.	May 22, 1860.
27231	Merrill, Rensselaer.	Elmira, N. Y.	Clothes dryer.	Feb. 21, 1860.
28762	Merrill, Rufus S.	Lynn, Mass.	Lamps, coal oil.	June 19, 1860.
30829	Merritt, Ansel D., and Cornelius Kimplen.	Woodstock, Ill.	Locomotive engines with water, supplying.	Dec. 4, 1860.
28099	Merritt, F. S.	New York, N. Y.	Ranges, cooking.	May 1, 1860.
29619	Merry, John.	Eldorado County, Cal.	Marking stock, mode of.	Aug. 14, 1860.
29985	Mertz, Bernhard.	Burlington, Iowa.	Harvesting machines.	Sept. 11, 1860.
30149	Messenger, Charles.	Warren, Ohio.	Chair for invalids.	Sept. 25, 1860.
30745	Messenger, Nelson.	Newark, Ill.	Cultivators.	Nov. 27, 1860.
29631	Messer, Henry, et al. (See Baldwin, Cyrus W., ass'r.)	Cleveland, Ohio.	Car windows, railroad, hanging sash of.	Aug. 14, 1860.
1351	Messer, M., and A. Steinbrener.	Boston, Mass.	Cloth, floor.	Dec. 4, 1860.
30521	Meyer, Charles T., assignor to Alden Sampson.	New York, N. Y.	Lead, chloride of, manufacture of.	Oct. 23, 1860.
28040	Meyer, Frederick Christian, assignor to E. Meyer.	Philadelphia, Pa.	Copying figures, &c., machine for.	April 24, 1860.
1183	Meyer, James, jr.	New York, N. Y.	Trade mark.	Jan. 3, 1860.
1257	Meyer, Louis.	St. Louis, Mo.	Stove, parlor.	June 19, 1860.
29506	Meyrose, Ferdinand.	St. Louis, Mo.	Candles, moulding.	Aug. 7, 1860.
27821	Mickle, George B., and J. M. Carville.	New York, N. Y.	Ladder, extension.	April 10, 1860.
27820	Mickle, George B., and J. M. Carville.	New York, N. Y.	Ladder, fire, truck for.	April 10, 1860.
29507	Middlebrook, S. S., and J. D. Blakslee. (See Blakslee & Middlebrook.)	Salem, Ga.	Cultivators, cotton.	Aug. 7, 1860.
29805	Middlebrooks, James L.	New York, N. Y.	Window washer.	Aug. 28, 1860.
30926	Middleton, John.	Clay Lick, Ohio.	Cultivators.	Dec. 18, 1860.
29825	Miers, Isaac.	Boston, Mass.	Stills, construction of condensers of.	May 15, 1860.
30078	Mihan, Patrick, and	Boston, Mass.	Condensation, apparatus for.	Sept. 18, 1860.
27142	Major A. Lane.	Charlestown, Mass.	Oxide of zinc, apparatus for manufacturing.	Feb. 14, 1860.
28326	Milbank, Isaac M.	New Haven, Conn.	Bedstead fastening.	May 15, 1860.
28393	Miles, Custer & Adle. (See Adle, Miles & Custer.)	New Haven, Conn.	Meat cutter.	May 22, 1860.
30746	Miles, Purches, assignor to A. P. Plant.	Centre, Ala.	Cotton scrapers.	Nov. 27, 1860.
27867	Milbolten, William L.	Chicago, Ill.	Sewing machines.	April 10, 1860.
28291	Millar, Warren, assignor to self and John Nutt.	Waterbury, Conn.	Chimney cowl.	May 15, 1860.
30884	Millard, George.	Littleton, N. H.	Ploughs, steam.	Dec. 11, 1860.
29653	Mullen, William H. H.	Brockport, N. Y.	Planters, corn.	Aug. 14, 1860.
28002	Miller, Aaron, assignor to self, G. B. Whiteside, G. F. Bar-	La Porte, Ind.	Evaporators, rotary, construction of.	April 24, 1860.
27671	Miller, Aaron H.	New York, N. Y.	Fabrics, piled, machinery for manufacturing.	Mar. 27, 1860.
28683	Miller, Charles, assignor to self and George Ricardo.	St. Louis, Mo.	Lamps.	June 12, 1860.
27556	Miller, Charles.	Madison, N. J.	Presses, hay and cotton.	Mar. 20, 1860.
28763	Miller, David L.	Brooklyn, N. Y.	Cigar rack for hats.	June 19, 1860.
29708	Miller, Edward. (See Marcy, John J., assignor.)	Cincinnati, Ohio.	Ploughs, hill-side.	Aug. 21, 1860.
27557	Miller, Frederick I.	Saltpetre, Ohio.	Water wheels.	Mar. 20, 1860.
28394	Miller, George C. and Richard Henry.	Philadelphia, Pa.	Butter, machine for printing.	May 22, 1860.
29986	Miller, James W., and Joel S. Blood. (See Blood & Miller.)	Hanoverton, Ohio.	Engines, steam, governors for.	Sept. 11, 1860.
29806	Miller, John.	Williamsport, Pa.	Car coupling, railroad.	Aug. 28, 1860.
28592	Miller, Joseph S., and S. Lloyd Wiegand.	Byhalia, Miss.	Presses, cotton.	June 5, 1860.
29986	Miller, S. H.			
29806	Miller, William H. H.			
28592	Millran, George			

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
30150	Milholland, James.	Reading, Pa.	Valves, slide.	Sept. 25, 1860.
30979	Mulligan, Patrick Francis.	Baltimore, Md.	Signals, railway.	Dec. 18, 1860.
30747	Millings, R. C.	Charleston, S. C.	Thill coupling.	Nov. 27, 1860.
	Mills, B., <i>et al.</i> (See Sherman & Fenwick, assignors.)			
28100	Mills, E. Wilson.	Amber, N. Y.	Wind mills.	May 1, 1860.
27463	Mills, George E.	New York, N. Y.	Ore washer.	Mar. 13, 1860.
28885	Mills, George E.	New York, N. Y.	Amalgamator.	June 26, 1860.
28439	Mills, George H.	East Boston, Mass.	Pumps.	May 22, 1860.
29807	Mills, James R.	Bloomfield, Iowa.	Planters, seed.	Aug. 28, 1860.
28497	Mills, John, jr.	Quincy, Ill.	Hempbreaks.	May 29, 1860.
30927	Mills, Philo P.	Washington, Ohio.	Sugar cane leaf stripper.	Dec. 18, 1860.
29439	Mills, Samuel, assignor to self and F. Franck.	New York, N. Y.	Window sashes, elevator and lock for.	July 31, 1860.
29508	Mills, Samuel, assignor to self and Frederick Franck.	New York, N. Y.	Life boat.	Aug. 7, 1860.
28886	Mills, T. S.	Iberia, Ohio.	Planters, corn.	June 26, 1860.
28101	Minard, O. W.	Waterbury, Conn.	Measuring tapes.	May 1, 1860.
26777	Miner, John, and Silas Merrick.	New Briton, Pa.	Cars, iron railroad.	Jan. 10, 1860.
29187	Miner, Leman C.	Hartford, Conn.	Vehicles, attaching thills to.	July 17, 1860.
28102	Mingay, Edward.	Boston, Mass.	Stoves, grates.	May 1, 1860.
27596	Minthorn, Daniel, assignor to John A. Green.	Beverly, Mass.	Syringes, enema.	Mar. 20, 1860.
29509	Mire, Evariste.	New Orleans, La.	Mills for cutting and grinding the corn, cob, and husk together.	Aug. 7, 1860.
26695	Misner, F. and P. A.	Fox, Ill.	Cultivators.	Jan. 3, 1860.
27005	Mitchell, A. G.	Lansingburg, N. Y.	Blocks, hair brush, machine for shaping.	Jan. 31, 1860.
28395	Mitchell, George A.	Turner, Me.	Boots and shoes, jointed tips for.	May 22, 1860.
28888	Mitchell, George A.	Turner, Me.	Shoe tips, machine for swaging.	June 25, 1860.
28887	Mitchell, George A.	Turner, Me.	Shoe tips, machine for cutting blanks for.	June 26, 1860.
28764	Mitchell, Henry.	Cincinnati, Ohio.	Cars, railroad, sprinkling attachment for.	June 19, 1860.
27927	Mitchell, Jehu.	Aleppo Township, Pa.	Churn.	April 17, 1860.
27232	Mitchell, John S.	South Boston, Mass.	Skates, spring.	Feb. 21, 1860.
28593	Mitchell, Matthew.	Altona, Ill.	Seeding machines.	June 5, 1860.
	Mitchell, Rammelsberg, <i>et al.</i> (See Stockton, V., assignor.)			
26778	Mitchell, Thomas.	Lansingburg, N. Y.	Boring brush blocks, machine for.	Jan. 10, 1860.
27462	Mitchell, William.	New York, N. Y.	Bone black, apparatus for revivifying.	Mar. 13, 1860.
28889	Mitchell, William P.	Baltimore, Md.	Sewing machines, hemming attachment for.	June 26, 1860.
27023	Mix, Eugene M. and James E., assignors to W. I. Huntington and Harvey Platt.	Ithica, N. Y.	Clocks, calendar.	Jan. 31, 1860.
29091	Mix, Simon H.	Schoharie, N. Y.	Stereotype plates, process for making.	July 10, 1860.
	Moeshlin & Tendler. (See Tendler & Moeshlin.)			
29901	Moffet, Albert.	Bristol, Ohio.	Waving patterns, machine for marking.	Sept. 4, 1860.
27006	Moffet, Thomas.	Chicago, Ill.	Time indicator, railroad.	Jan. 31, 1860.
30684	Moffitt, J. W.	Harrisburg, Pa.	Teeth, artificial.	Nov. 20, 1860.
30491	Mobler, James B.	Pekin, Ill.	Weighing machines, grain.	Oct. 23, 1860.
29297	Mobler, Richard.	Lancaster, Pa.	Smut machines.	July 24, 1860.
30339	Mollner, Titus.	New Orleans, La.	Scumming, apparatus for.	Oct. 9, 1860.
	Molyneux & Allen. (See Allen & Molyneux.)			

30026	Molyneux, James, assignor to the Bordentown Machine Company.	Bordentown, N. J.	Tiles, blocks for forming	Sept. 11, 1860.
28396	{ Montague, Daniel, and James Townsend }	New Bedford, Mass.	Glass doorplate	May 22, 1860.
29291	Montague, Edwin M., et al. (See Ames, Nathan, ass't.)	New York, N. Y.	Method of suspending school globes	July 24, 1860.
29292	Monteith, James.	New York, N. Y.	Method of suspending school globes.	July 24, 1860.
26779	Monteith, James.	Baltimore, Md.	Boilers, steam.	Jan. 10, 1860.
27922	Montgomery, James.	Baltimore, Md.	Boilers, steam, combined salinometer and water gauge for.	April 17, 1860.
28003	Montgomery, James.	Baltimore, Md.	Car axles, railroad.	April 24, 1860.
28004	Montgomery, James.			
29510	Montgomery, Richard.	New York, N. Y.	Cars, iron.	Aug. 7, 1860.
28765	Mood, L., and D. P. Sharp. (See Sharp & Mood.)	Clinton, Iowa	Doeks, wharves, &c., fender for.	June 19, 1860.
28995	Moomey, Jacob.	Alexandria, Va.	Car bodies with trucks, mode of connecting.	July 3, 1860.
30079	Moore, Charles S.	Brooklyn, N. Y.	Fire-arms, revolving.	Sept. 18, 1860.
30492	Moore, Daniel.	Panola, Miss.	Bedstead, fan ventilating.	Oct. 23, 1860.
29298	Moore, George R.	Pittsburg, Pa.	Pokers, fire.	July 24, 1860.
29808	Moore, George R.	Pittsburg, Pa.	Seaming machines, gauge for double.	Aug. 28, 1860.
30685	Moore, Hiram.	Brandon, Wis.	Drills, seed.	Nov. 20, 1860.
27923	Moore, James, and Archibald Kelly.	Pittsburg, Pa.	Fence, machine for making picket.	April 17, 1860.
27374	Moore, James D.	Zanesville, Ohio.	Fire-arm, self-loading.	Mar. 6, 1860.
28498	Moore, J. Campbell.	Peoria, Ill.	Planters, corn.	May 29, 1860.
30748	Moore, M. H., and Alexander Satterwhite.	Rome, Ga.	Cultivators.	Nov. 27, 1860.
28681	Moore, Samuel.	Wellsburgh, Va.	Mills, grinding.	June 12, 1860.
26696	Morehouse, Albert.	Farmer, N. Y.	Water wheels, gates for.	Jan. 3, 1860.
28682	Morehouse, Albert.	Farmer, N. Y.	Water wheels.	June 12, 1860.
26697	Morell, J. F., and J. M. Patterson. (See Patterson & Morell.)	New York, N. Y.	Wax, substitute for.	Jan. 3, 1860.
26780	Morfit, Campbell.	New York, N. Y.	Candles, composition for coating.	Jan. 10, 1860.
27558	Morgan, D. S., et al. (See Seymour, William H., ass't.)			
1260	Morgan, D. S. (See St. John, J. A., assignor.)	Prattsburg, N. Y.	Wagon brake, self-acting.	Mar. 20, 1860.
1261	Morgan, George W.	South Norwalk, Conn.	Shovel, fire.	June 19, 1860.
1262	Morgan, Lemuel, assignor to self and Chauncey Adams.	South Norwalk, Conn.	Shovel, fire.	June 19, 1860.
1263	Morgan, Lemuel, assignor to self and Chauncey Adams.	South Norwalk, Conn.	Shovel, fire.	June 19, 1860.
28890	Morgan, Lemuel, assignor to self and Chauncey Adams.	South Norwalk, Conn.	Shovel, fire.	June 19, 1860.
27559	Morgan, Stephen A. and Curtis C.	Auburn, N. Y.	Harrows.	June 26, 1860.
28767	Morgan, Whitney & Priest. (See Rice, Benjamin F., assignor.)			
27924	Morgan, William.	Middlebrook, Va.	Churn.	Mar. 20, 1860.
30639	Morison, Benjamin.	Philadelphia, Pa.	Envelope	June 19, 1860.
27732	Morley, Philemon A.	Brooklyn, N. Y.	Lanterns	April 17, 1860.
28103	Morley, P. A., and J. P. McLean. (See McLean & Morley.)	Brooklyn, N. Y.	Fire escapes.	Nov. 13, 1860.
29293	Morohan, Hugh.	Boston, Mass.	Burners, vapor.	April 3, 1860.
28891	Morrell, John R. (See Rose, J. M., assignor.)	Philadelphia, Pa.	Restoring burnt iron.	May 1, 1860.
	Morrill, Oscar F.	Ansonia, Conn.	Cabinet work, machine for polishing.	July 24, 1860.
	Morris, George W., and William Quann.	Woodbury, Ill.	Planters, corn.	June 26, 1860.

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
30150	Milholland, James.	Reading, Pa.	Valves, slide.	Sept. 25, 1860.
30979	Mulligan, Patrick Francis.	Baltimore, Md.	Signals, railway.	Dec. 18, 1860.
30747	Millings, R. C.	Charleston, S. C.	Thill coupling.	Nov. 27, 1860.
28100	Mills, B., et al. (See Sherman & Fenwick, assignors.)	Amber, N. Y.	Wind mills.	May 1, 1860.
27463	Mills, E. Wilson.	New York, N. Y.	Ore washer.	Mar. 13, 1860.
28885	Mills, George E.	New York, N. Y.	Amalgamator.	June 26, 1860.
28439	Mills, George E.	East Boston, Mass.	Pumps.	May 22, 1860.
29807	Mills, George H.	Bloomfield, Iowa	Planters, seed.	Aug. 28, 1860.
28497	Mills, James R.	Quincy, Ill.	Hempbreaks.	May 29, 1860.
30927	Mills, John, jr.	Washington, Ohio.	Sugar cane leaf stripper.	Dec. 18, 1860.
29439	Mills, Philo P.	New York, N. Y.	Window sashes, elevator and lock for.	July 31, 1860.
29508	Mills, Samuel, assignor to self and F. Franck.	New York, N. Y.	Life boat.	Aug. 7, 1860.
28886	Mills, Samuel, assignor to self and Frederick Franck.	New York, N. Y.	Planters, corn.	June 26, 1860.
28101	Minard, O. W.	Iberia, Ohio.	Measuring tapes.	May 1, 1860.
26777	Miner, John, and Silas Merrick.	Waterbury, Conn.	Cars, iron railroad.	Jan. 10, 1860.
29187	Miner, Leman C.	New Briton, Pa.	Vehicles, attaching thills to.	July 17, 1860.
28102	Mingay, Edward.	Hartford, Conn.	Stoves, grates.	May 1, 1860.
27596	Minthorn, Daniel, assignor to John A. Green.	Boston, Mass.	Syringes, enema.	Mar. 20, 1860.
29509	Mire, Evariste.	Beverly, Mass.	Mills for cutting and grinding the corn, cob, and husk together.	Aug. 7, 1860.
26695	Misner, F. and P. A.	New Orleans, La.	Cultivators.	Jan. 3, 1860.
27005	Mitchell, A. G.	Fox, Ill.	Blocks, hair brush, machine for shaping.	Jan. 31, 1860.
28395	Mitchell, George A.	Lansingburg, N. Y.	Boots and shoes, jointed tips for.	May 22, 1860.
28888	Mitchell, George A.	Turner, Me.	Shoe tips, machine for swaging.	June 25, 1860.
29887	Mitchell, George A.	Turner, Me.	Shoe tips, machine for cutting blanks for.	June 26, 1860.
28764	Mitchell, Henry.	Turner, Me.	Cars, railroad, sprinkling attachment for.	June 19, 1860.
27927	Mitchell, Jehu.	Cincinnati, Ohio.	Churn.	April 17, 1860.
27232	Mitchell, John S.	Aleppo Township, Pa.	Skates, spring.	Feb. 21, 1860.
28593	Mitchell, Matthew.	South Boston, Mass.	Seeding machines.	June 5, 1860.
25778	Mitchell, Rammelsberg, et al. (See Stockton, V., assignor.)	Altona, Ill.	Boring brush blocks, machine for.	Jan. 10, 1860.
27462	Mitchell, Thomas.	Lansingburg, N. Y.	Bone black, apparatus for revivifying.	Mar. 13, 1860.
28889	Mitchell, William.	New York, N. Y.	Sewing machines, hemming attachment for.	June 26, 1860.
27023	Mitchell, William P.	Baltimore, Md.	Clocks, calendar.	Jan. 31, 1860.
29091	Mix, Eugene M. and James E., assignors to W. I. Huntington and Harvey Platt.	Ithica, N. Y.	Stereotype plates, process for making.	July 10, 1860.
29301	Mix, Simon H.	Schoharie, N. Y.	Waving patterns, machine for marking.	Sept. 4, 1860.
27006	Moeshlin & Tendler. (See Tendler & Moeshlin.)	Bristol, Ohio.	Time indicator, railroad.	Jan. 31, 1860.
30684	Moffet, Albert.	Chicago, Ill.	Teeth, artificial.	Nov. 20, 1860.
30491	Moffet, Thomas.	Harrisburg, Pa.	Weighing machines, grain.	Oct. 23, 1860.
29297	Moffitt, J. W.	Pekin, Ill.	Smut machines.	July 24, 1860.
30339	Mobler, James B.	Lancaster, Pa.	Scumming, apparatus for.	Oct. 9, 1860.
	Mobler, Richard.	New Orleans, La.		
	Molinier, Titus.			
	Molyneux & Allen. (See Allen & Molyneux.)			

30026	Molyneux, James, assignor to the Bordentown Machine Company.	Bordentown, N. J.	Tiles, blocks for forming	Sept. 11, 1860.
28396	{ Montague, Daniel, and James Townsend }	New Bedford, Mass.	Glass doorplate	May 22, 1860.
29291	Montague, Edwin M., et al. (See Ames, Nathan, ass'r.)	New York, N. Y.	Method of suspending school globes	July 24, 1860.
29292	Montell, James	New York, N. Y.	Method of suspending school globes	July 24, 1860.
26779	Montell, James	Baltimore, Md.	Boilers, steam, construction of	Jan. 10, 1860.
27923	Montgomery, James	Baltimore, Md.	Boilers, steam	April 17, 1860.
28003	Montgomery, James	Baltimore, Md.	Boilers, steam, combined salinometer and water gauge for	April 24, 1860.
28004	Montgomery, James	Baltimore, Md.	Car axles, railroad	Aug. 7, 1860.
29510	Montgomery, Richard	New York, N. Y.	Cars, iron	June 19, 1860.
29765	Mood, L., and D. P. Sharp. (See Sharp & Mood.)	Clinton, Iowa	Doeks, wharves, &c., fender for	July 3, 1860.
28995	Moomey, Jacob	Alexandria, Va.	Car bodies with trucks, mode of connecting	Sept. 18, 1860.
30079	Moore, Charles S.	Brooklyn, N. Y.	Fire-arms, revolving	Oct. 23, 1860.
30492	Moore, Daniel	Panola, Miss.	Bedstead, fan ventilating	July 24, 1860.
29298	Moore, George R.	Pittsburg, Pa.	Pokers, fire	Aug. 28, 1860.
29808	Moore, George R.	Pittsburg, Pa.	Seaming machines, gauge for double	Nov. 20, 1860.
30685	Moore, Hiram	Brandon, Wis.	Drills, seed	April 17, 1860.
27923	Moore, James, and Archibald Kelly	Pittsburg, Pa.	Fence, machine for making picket	Mar. 6, 1860.
27374	Moore, James D.	Zanesville, Ohio	Fire-arm, self-loading	May 29, 1860.
28498	Moore, J. Campbell	Peoria, Ill.	Planters, corn	Nov. 27, 1860.
30748	Moore, M. H., and Alexander Satterwhite	Rome, Ga.	Cultivators	June 12, 1860.
28681	Moore, Samuel	Wellsburgh, Va.	Mills, grinding	Jan. 3, 1860.
28696	Morehouse, Albert	Farmer, N. Y.	Water wheels, gates for	June 12, 1860.
28682	Morehouse, Albert	Farmer, N. Y.	Water wheels	Jan. 10, 1860.
26697	Morell, J. F., and J. M. Patterson. (See Patterson & Morell.)	New York, N. Y.	Wax, substitute for	Mar. 20, 1860.
26780	Morfit, Campbell	New York, N. Y.	Candles, composition for coating	June 19, 1860.
27558	Morgan, D. S., et al. (See Seymour, William H., ass'r.)	Prattsburg, N. Y.	Wagon brake, self-acting	June 19, 1860.
1260	Morgan, D. S. (See St. John, J. A., assignor.)	South Norwalk, Conn.	Shovel, fire	June 19, 1860.
1261	Morgan, George W.	South Norwalk, Conn.	Shovel, fire	June 19, 1860.
1262	Morgan, Lemuel, assignor to self and Chauncey Adams	South Norwalk, Conn.	Shovel, fire	June 19, 1860.
1263	Morgan, Lemuel, assignor to self and Chauncey Adams	South Norwalk, Conn.	Shovel, fire	June 26, 1860.
28890	Morgan, Lemuel, assignor to self and Chauncey Adams	South Norwalk, Conn.	Shovel, fire	June 26, 1860.
27559	Morgan, Stephen A. and Curtis C.	Auburn, N. Y.	Harrows	Mar. 20, 1860.
28767	Morgan, Whitney & Priest. (See Rice, Benjamin F., assignor.)	Middlebrook, Va.	Churn	June 19, 1860.
27924	Morgan, William	Philadelphia, Pa.	Envelope	April 17, 1860.
30639	Morison, Benjamin	Brooklyn, N. Y.	Lanterns	Nov. 13, 1860.
27732	Morley, Philemon A.	Brooklyn, N. Y.	Fire escapes	April 3, 1860.
28103	Morley, P. A., and J. P. McLean. (See McLean & Morley.)	Boston, Mass.	Burners, vapor	May 1, 1860.
29293	Morrell, John R. (See Rose, J. M., assignor.)	Philadelphia, Pa.	Restoring burnt iron	July 24, 1860.
28891	Morrill, Oscar F.	Ansonia, Conn.	Cabinet work, machine for polishing	June 26, 1860.
	Morris, George W., and William Quann	Woodbury, Ill.	Planters, corn	
	Morris, Joel B.			
	Morris, Levi			

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
30150	Millholland, James.....	Reading, Pa.....	Valves, slide.....	Sept. 25, 1860.
30979	Milligan, Patrick Francis.....	Baltimore, Md.....	Signals, railway.....	Dec. 18, 1860.
30747	Millings, R. C.....	Charleston, S. C.....	Thill coupling.....	Nov. 27, 1860.
28100	Mills, B., et al. (See Sherman & Fenwick, assignors.)	Amber, N. Y.....	Wind mills.....	May 1, 1860.
27463	Mills, E. Wilson.....	New York, N. Y.....	Ore washer.....	Mar. 13, 1860.
28885	Mills, George E.....	New York, N. Y.....	Amalgamator.....	June 26, 1860.
28439	Mills, George E.....	East Boston, Mass.....	Pumps.....	May 22, 1860.
29807	Mills, George H.....	Bloomfield, Iowa.....	Planters, seed.....	Aug. 28, 1860.
28497	Mills, James R.....	Quincy, Ill.....	Hempbreaks.....	May 29, 1860.
30927	Mills, John, jr.....	Washington, Ohio.....	Sugar cane leaf stripper.....	Dec. 18, 1860.
29439	Mills, Philo P.....	New York, N. Y.....	Window sashes, elevator and lock for.....	July 31, 1860.
29508	Mills, Samuel, assignor to self and F. Franck.....	New York, N. Y.....	Life boat.....	Aug. 7, 1860.
28886	Mills, Samuel, assignor to self and Frederick Franck.....	New York, N. Y.....	Planters, corn.....	June 26, 1860.
28101	Mills, T. S.....	Iberia, Ohio.....	Measuring tapes.....	May 1, 1860.
26777	Minard, O. W.....	Waterbury, Conn.....	Cars, iron railroad.....	Jan. 10, 1860.
29187	Miner, John, and Silas Merrick.....	New Britain, Pa.....	Vehicles, attaching thills to.....	July 17, 1860.
28102	Miner, Leman C.....	Hartford, Conn.....	Stoves, grates.....	May 1, 1860.
27596	Mingay, Edward.....	Boston, Mass.....	Syringes, enema.....	Mar. 20, 1860.
29509	Minthorn, Daniel, assignor to John A. Green.....	Beverly, Mass.....	Mills for cutting and grinding the corn, cob, and husk together.....	Aug. 7, 1860.
26695	Misner, F. and P. A.....	New Orleans, La.....		
27005	Mitchell, A. G.....	Fox, Ill.....	Cultivators.....	Jan. 3, 1860.
28395	Mitchell, George A.....	Lansingburg, N. Y.....	Blocks, hair brush, machine for shaping.....	Jan. 31, 1860.
28888	Mitchell, George A.....	Turner, Me.....	Boots and shoes, jointed tips for.....	May 22, 1860.
28887	Mitchell, George A.....	Turner, Me.....	Shoe tips, machine for swaging.....	June 26, 1860.
28764	Mitchell, George A.....	Turner, Me.....	Shoe tips, machine for cutting blanks for.....	June 26, 1860.
27927	Mitchell, Henry.....	Cincinnati, Ohio.....	Cars, railroad, sprinkling attachment for.....	June 19, 1860.
27232	Mitchell, Jehu.....	Aleppo Township, Pa.....	Churn.....	April 17, 1860.
28593	Mitchell, John S.....	South Boston, Mass.....	Skates, spring.....	Feb. 21, 1860.
26778	Mitchell, Matthew.....	Altona, Ill.....	Seeding machines.....	June 5, 1860.
27462	Mitchell, Rammelsberg, et al. (See Stockton, V., assignor.)	Lansingburg, N. Y.....	Boring brush blocks, machine for.....	Jan. 10, 1860.
28889	Mitchell, Thomas.....	New York, N. Y.....	Bone black, apparatus for revivifying.....	Mar. 13, 1860.
27023	Mitchell, William.....	Baltimore, Md.....	Sewing machines, hemming attachment for.....	June 26, 1860.
29091	Mitchell, William P.....	Ithica, N. Y.....	Clocks, calendar.....	Jan. 31, 1860.
29091	Mix, Eugene M. and James E., assignors to W. I. Huntington and Harvey Platt.....	Schoharie, N. Y.....	Stereotype plates, process for making.....	July 10, 1860.
29901	Mix, Simon H.....	Bristol, Ohio.....	Waving patterns, machine for marking.....	Sept. 4, 1860.
27006	Mocshlin & Tendler. (See Tendler & Mocshlin.)	Chicago, Ill.....	Time indicator, railroad.....	Jan. 31, 1860.
30684	Moffet, Albert.....	Harrisburg, Pa.....	Teeth, artificial.....	Nov. 20, 1860.
30491	Moffitt, J. W.....	Pekin, Ill.....	Weighing machines, grain.....	Oct. 23, 1860.
29297	Mohler, James B.....	Lancaster, Pa.....	Smut machines.....	July 24, 1860.
30339	Mohler, Richard.....	New Orleans, La.....	Scumming, apparatus for.....	Oct. 9, 1860.
	Molinier, Titus.....			
	Molyneux & Allen. (See Allen & Molyneux.)			

30026	Molyneux, James, assignor to the Bordentown Machine Company.	Bordentown, N. J.	Tiles, blocks for forming	Sept. 11, 1860.
28396	{ Montague, Daniel, and James Townsend.	New Bedford, Mass.	Glass doorplate	May 22, 1860.
29291	Montague, Edwin M., et al. (See Ames, Nathan, ass'r.)	New York, N. Y.	Method of suspending school globes	July 24, 1860.
29292	Montelth, James.	New York, N. Y.	Method of suspending school globes.	July 24, 1860.
26779	Montelth, James.	Baltimore, Md.	Boilers, steam, construction of.	Jan. 10, 1860.
27923	Montgomery, James.	Baltimore, Md.	Boilers, steam, combined salinometer and water gauge for.	April 17, 1860.
28003	Montgomery, James.	Baltimore, Md.	Car axles, railroad.	April 24, 1860.
28004	Montgomery, James.	Baltimore, Md.		
29510	Montgomery, Richard.	New York, N. Y.	Cars, iron.	Aug. 7, 1860.
28765	Mood, L., and D. P. Sharp. (See Sharp & Mood.)	Clinton, Iowa	Doeks, wharves, &c., fender for.	June 19, 1860.
28995	Moomey, Jacob.	Alexandria, Va.	Car bodies with trucks, mode of connecting.	July 3, 1860.
30079	Moore, Charles S.	Brooklyn, N. Y.	Fire-arms, revolving.	Sept. 18, 1860.
30492	Moore, Daniel.	Panola, Miss.	Bedstead, fan ventilating.	Oct. 23, 1860.
29298	Moore, George R.	Pittsburg, Pa.	Pokers, fire.	July 24, 1860.
29808	Moore, George R.	Pittsburg, Pa.	Seaming machines, gauge for double.	Aug. 28, 1860.
30685	Moore, Hiram.	Brandon, Wis.	Drills, seed.	Nov. 20, 1860.
27923	Moore, James, and Archibald Kelly.	Pittsburg, Pa.	Fence, machine for making picket.	April 17, 1860.
27374	Moore, James D.	Zanesville, Ohio.	Fire-arm, self-loading.	Mar. 6, 1860.
28498	Moore, J. Campbell.	Peoria, Ill.	Planters, corn.	May 29, 1860.
30748	Moore, M. H., and Alexander Satterwhite.	Rome, Ga.	Cultivators.	Nov. 27, 1860.
28681	Moore, Samuel.	Wellsburgh, Va.	Mills, grinding.	June 12, 1860.
26696	Morehouse, Albert.	Farmer, N. Y.	Water wheels, gates for.	Jan. 3, 1860.
28682	Morehouse, Albert.	Farmer, N. Y.	Water wheels.	June 12, 1860.
26697	Morell, J. F., and J. M. Patterson. (See Patterson & Morell.)	New York, N. Y.	Wax, substitute for.	Jan. 3, 1860.
26780	Morfit, Campbell.	New York, N. Y.	Candles, composition for coating.	Jan. 10, 1860.
27558	Morgan, D. S., et al. (See Seymour, William H., ass'r.)	Prattsburg, N. Y.	Wagon brake, self-acting.	Mar. 20, 1860.
1260	Morgan, D. S. (See St. John, J. A., assignor.)	South Norwalk, Conn.	Shovel, fire.	June 19, 1860.
1261	Morgan, George W.	South Norwalk, Conn.	Shovel, fire.	June 19, 1860.
1262	Morgan, Lemuel, assignor to self and Chauncey Adams.	South Norwalk, Conn.	Shovel, fire.	June 19, 1860.
1263	Morgan, Lemuel, assignor to self and Chauncey Adams.	South Norwalk, Conn.	Shovel, fire.	June 19, 1860.
28890	Morgan, Lemuel, assignor to self and Chauncey Adams.	South Norwalk, Conn.	Shovel, fire.	June 19, 1860.
	Morgan, Stephen A. and Curtis C.	Auburn, N. Y.	Harrows.	June 26, 1860.
	Morgan, Whitney & Priest. (See Rice, Benjamin F., assignor.)			
27559	Morgan, William.	Middlebrook, Va.	Churn.	Mar. 20, 1860.
28767	Morison, Benjamin.	Philadelphia, Pa.	Envelope	June 19, 1860.
27924	Morley, Philemon A.	Brooklyn, N. Y.	Lanterns	April 17, 1860.
30639	Morley, P. A., and J. P. McLean. (See McLean & Morley.)	Brooklyn, N. Y.	Fire escapes.	Nov. 13, 1860.
27732	Morohan, Hugh.	Boston, Mass.	Burners, vapor.	April 3, 1860.
28103	Morrell, John R. (See Rose, J. M., assignor.)	Philadelphia, Pa.	Restoring burnt iron.	May 1, 1860.
29293	Morrill, Oscar F.	Ansonia, Conn.	Cabinet work, machine for polishing.	July 24, 1860.
28891	Morris, George W., and William Quann.	Woodbury, Ill.	Planters, corn.	June 26, 1860.
	Morris, Joel B.			
	Morris, Levi			

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
30150	Milholland, James.	Reading, Pa.	Valves, slide.	Sept. 25, 1860.
30979	Milligan, Patrick Francis.	Baltimore, Md.	Signals, railway.	Dec. 18, 1860.
30747	Millings, R. C.	Charleston, S. C.	Thill coupling.	Nov. 27, 1860.
	Mills, B., et al. (See Sherman & Fenwick, assignors.)			
28100	Mills, E. Wilson.	Amber, N. Y.	Wind mills.	May 1, 1860.
27463	Mills, George E.	New York, N. Y.	Ore washer.	Mar. 13, 1860.
28885	Mills, George E.	New York, N. Y.	Amalgamator.	June 26, 1860.
28439	Mills, George H.	East Boston, Mass.	Pumps.	May 22, 1860.
29807	Mills, James R.	Bloomfield, Iowa.	Planters, seed.	Aug. 28, 1860.
28497	Mills, John, jr.	Quincy, Ill.	Hempbreaks.	May 29, 1860.
30927	Mills, Philo P.	Washington, Ohio.	Sugar cane leaf stripper.	Dec. 18, 1860.
29439	Mills, Samuel, assignor to self and F. Franck.	New York, N. Y.	Window sashes, elevator and lock for.	July 31, 1860.
29508	Mills, Samuel, assignor to self and Frederick Franck.	New York, N. Y.	Life boat.	Aug. 7, 1860.
28886	Mills, T. S.	Iberia, Ohio.	Planters, corn.	June 26, 1860.
28101	Minard, O. W.	Waterbury, Conn.	Measuring tapes.	May 1, 1860.
26777	Miner, John, and Silas Merrick.	New Britain, Pa.	Cars, iron railroad.	Jan. 10, 1860.
29187	Miner, Leman C.	Hartford, Conn.	Vehicles, attaching thills to.	July 17, 1860.
28102	Mingay, Edward.	Boston, Mass.	Stoves, grates.	May 1, 1860.
27596	Minthorn, Daniel, assignor to John A. Green.	Beverly, Mass.	Syringes, enema.	Mar. 20, 1860.
29509	Mire, Evariste.	New Orleans, La.	Mills for cutting and grinding the corn, cob, and husk together.	Aug. 7, 1860.
26695	Misner, F. and P. A.	Fox, Ill.	Cultivators.	Jan. 3, 1860.
27005	Mitchell, A. G.	Lansingburg, N. Y.	Blocks, hair brush, machine for shaping.	Jan. 31, 1860.
28395	Mitchell, George A.	Turner, Me.	Boots and shoes, jointed tips for.	May 22, 1860.
28888	Mitchell, George A.	Turner, Me.	Shoe tips, machine for swaging.	June 26, 1860.
28887	Mitchell, George A.	Turner, Me.	Shoe tips, machine for cutting blanks for.	June 26, 1860.
28764	Mitchell, Henry.	Cincinnati, Ohio.	Cars, railroad, sprinkling attachment for.	June 19, 1860.
27927	Mitchell, Jehu.	Aleppo Township, Pa.	Churn.	April 17, 1860.
27232	Mitchell, John S.	South Boston, Mass.	Skates, spring.	Feb. 21, 1860.
28593	Mitchell, Matthew.	Altona, Ill.	Seeding machines.	June 5, 1860.
	Mitchell, Rammelsberg, et al. (See Stockton, V., assignor.)			
25778	Mitchell, Thomas.	Lansingburg, N. Y.	Boring brush blocks, machine for.	Jan. 10, 1860.
27462	Mitchell, William.	New York, N. Y.	Bone black, apparatus for revivifying.	Mar. 13, 1860.
28889	Mitchell, William P.	Baltimore, Md.	Sewing machines, hemming attachment for.	June 26, 1860.
27023	Mix, Eugene M. and James E., assignors to W. I. Huntington and Harvey Platt.	Ithica, N. Y.	Clocks, calendar.	Jan. 31, 1860.
29091	Mix, Simon H.	Schoharie, N. Y.	Stereotype plates, process for making.	July 10, 1860.
	Moeshlin & Tendler. (See Tendler & Moeshlin.)			
29901	Moffet, Albert.	Bristol, Ohio.	Waving patterns, machine for marking.	Sept. 4, 1860.
27006	Moffet, Thomas.	Chicago, Ill.	Time indicator, railroad.	Jan. 31, 1860.
30684	Moffitt, J. W.	Harrisburg, Pa.	Teeth, artificial.	Nov. 20, 1860.
30491	Mobler, James B.	Pekin, Ill.	Weighing machines, grain.	Oct. 23, 1860.
29297	Mobler, Richard.	Lancaster, Pa.	Smut machines.	July 24, 1860.
30339	Molinier, Titus.	New Orleans, La.	Scumming, apparatus for.	Oct. 9, 1860.
	Molyneux & Allen. (See Allen & Molyneux.)			

30026	Molyneux, James, assignor to the Bordentown Machine Company.	Bordentown, N. J.	Sept. 11, 1860.
28396	{ Montague, Daniel, and James Townsend Montague, Edwin M., et al. (See Ames, Nathan, ass'r.)	New Bedford, Mass. Gardiner, Me.	May 22, 1860.
29291	Monteith, James.	New York, N. Y.	July 24, 1860.
29292	Monteith, James.	New York, N. Y.	July 24, 1860.
26779	Montgomery, James.	Baltimore, Md.	Jan. 10, 1860.
27922	Montgomery, James.	Baltimore, Md.	April 17, 1860.
28003	Montgomery, James.	Baltimore, Md.	April 24, 1860.
28004	Montgomery, James.	Baltimore, Md.	April 24, 1860.
29510	Montgomery, Richard.	New York, N. Y.	Aug. 7, 1860.
28765	Mood, L., and D. P. Sharp. (See Sharp & Mood.)	Clinton, Iowa	June 19, 1860.
28995	Mooney, Jacob.	Alexandria, Va.	July 3, 1860.
30079	Moore, Charles S.	Brooklyn, N. Y.	Sept. 18, 1860.
30402	Moore, Daniel.	Panola, Miss.	Oct. 23, 1860.
29298	Moore, George R.	Pittsburg, Pa.	July 24, 1860.
29808	Moore, George R.	Pittsburg, Pa.	Aug. 28, 1860.
30685	Moore, Hiram.	Brandon, Wis.	Nov. 20, 1860.
27923	Moore, James, and Archibald Kelly.	Pittsburg, Pa.	April 17, 1860.
27374	Moore, James D.	Zanesville, Ohio.	Mar. 6, 1860.
28498	Moore, J. Campbell.	Peoria, Ill.	May 29, 1860.
30748	Moore, M. H., and Alexander Satterwhite.	Rome, Ga.	Nov. 27, 1860.
28681	Moore, Samuel.	Wellsburgh, Va.	June 12, 1860.
26696	Morehouse, Albert.	Farmer, N. Y.	Jan. 3, 1860.
28682	Morehouse, Albert.	Farmer, N. Y.	June 12, 1860.
26697	Morell, J. F., and J. M. Patterson. (See Patterson & Morell.)	New York, N. Y.	Jan. 3, 1860.
26780	Morell, J. F., and J. M. Patterson. (See Patterson & Morell.)	New York, N. Y.	Jan. 10, 1860.
27558	Morfit, Campbell.	Prattsburg, N. Y.	Mar. 20, 1860.
1260	Morgan, Lemuel, assignor to self and Chauncey Adams.	South Norwalk, Conn.	June 19, 1860.
1361	Morgan, Lemuel, assignor to self and Chauncey Adams.	South Norwalk, Conn.	June 19, 1860.
1262	Morgan, Lemuel, assignor to self and Chauncey Adams.	South Norwalk, Conn.	June 19, 1860.
1263	Morgan, Lemuel, assignor to self and Chauncey Adams.	South Norwalk, Conn.	June 19, 1860.
28890	Morgan, Lemuel, assignor to self and Chauncey Adams.	South Norwalk, Conn.	June 19, 1860.
27559	Morgan, Stephen A. and Curtis C. (See Rice, Benjamin F., assignor.)	Auburn, N. Y.	June 26, 1860.
28767	Morgan, Whitney & Priest. (See Rice, Benjamin F., assignor.)	Middlebrook, Va.	Mar. 20, 1860.
27924	Morgan, William.	Philadelphia, Pa.	June 19, 1860.
30639	Morison, Benjamin.	Brooklyn, N. Y.	April 17, 1860.
27732	Morley, Philemon A.	Brooklyn, N. Y.	Nov. 13, 1860.
28103	Morley, P. A., and J. P. McLean. (See McLean & Morley.)	Brooklyn, N. Y.	Nov. 13, 1860.
29293	Morley, P. A., and J. P. McLean. (See McLean & Morley.)	Brooklyn, N. Y.	Nov. 13, 1860.
28891	Morley, P. A., and J. P. McLean. (See McLean & Morley.)	Brooklyn, N. Y.	Nov. 13, 1860.
27732	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28103	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
29293	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28891	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
27732	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28103	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
29293	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28891	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
27732	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28103	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
29293	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28891	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
27732	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28103	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
29293	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28891	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
27732	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28103	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
29293	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28891	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
27732	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28103	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
29293	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28891	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
27732	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28103	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
29293	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28891	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
27732	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28103	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
29293	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28891	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
27732	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28103	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
29293	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28891	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
27732	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28103	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
29293	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28891	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
27732	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28103	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
29293	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28891	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
27732	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28103	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
29293	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28891	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
27732	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28103	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
29293	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28891	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
27732	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28103	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
29293	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28891	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
27732	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28103	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
29293	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28891	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
27732	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28103	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
29293	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28891	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
27732	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28103	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
29293	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28891	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
27732	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28103	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
29293	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28891	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
27732	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28103	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
29293	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28891	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
27732	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28103	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
29293	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28891	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
27732	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28103	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
29293	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28891	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
27732	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28103	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
29293	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28891	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
27732	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28103	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
29293	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28891	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
27732	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28103	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
29293	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28891	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
27732	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28103	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
29293	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28891	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
27732	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28103	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
29293	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28891	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
27732	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28103	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
29293	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28891	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
27732	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28103	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
29293	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28891	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
27732	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28103	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
29293	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28891	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
27732	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28103	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
29293	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28891	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
27732	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28103	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
29293	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28891	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
27732	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28103	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
29293	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28891	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
27732	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28103	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
29293	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28891	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
27732	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28103	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
29293	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28891	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
27732	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28103	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
29293	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28891	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
27732	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28103	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
29293	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28891	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
27732	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28103	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
29293	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28891	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
27732	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28103	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
29293	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28891	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
27732	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28103	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
29293	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28891	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
27732	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28103	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
29293	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28891	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
27732	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
28103	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y.	Nov. 13, 1860.
29293	Morrell, John R. (See Rose, J. M., assignor.)	Brooklyn, N. Y	

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
30522	Morris, Thomas A., assignor to self and F. R. Schettler.	Green Bay, Wis.	Quartz, crushing and pulverizing.	Oct. 23, 1860.
26919	Morris, William Hopkins, and Charles Liston Brown.	New York, N. Y.	Fire-arms, repeating.	Jan. 24, 1860.
30749	Morrison, J., jr. (See Bates, R. H. N., assignor.) Morrison, James, jr. (See Parnell, James, assignor.) Morrison, James. Morrison, John, and T. B. Peddie. (See Dunham, Theodore R., assignor.)	Clinton, Me.	Seeding machines.	Nov. 27, 1860.
29294	Morrison, Robert.	Rahway, N. J.	Thills to axles, coupling of.	July 24, 1860.
28719	Morrison, Thomas, assignor to C. B. Safford. Morrison, William, and Allan Agnew. (See Agnew & Morrison.)	Kingston, N. Y.	Chronometer escapement.	June 12, 1860.
28292	Morse, Harris.	Columbia, Cal.	Treatment of snow or ice to convert it into large blocks.	May 15, 1860.
30830	Morse, John H.	Peoria, Ill.	Lock, combination.	Dec. 4, 1860.
27063	Morse, William A.	Boston, Mass.	Pen handle.	Feb. 7, 1860.
28766	Morse, William A., and D. S. Bean.	Boston, Mass.	Bed bottom, spring.	June 19, 1860.
29809	Morton, Alexander.	New York, N. Y.	Rolling gold pens, machine for.	Aug. 28, 1860.
30080	Morton, Alexander.	New York, N. Y.	Hammers, trip.	Sept. 28, 1860.
28005	Morton, C. P.	Philadelphia, Pa.	Saw mills.	April 24, 1860.
26857	Morton, Washington.	Friendship, Me.	Sails, reefing fore and aft.	Jan. 17, 1860.
27464	Moser, Andrew A.	New York, N. Y.	Book ruler.	Mar. 13, 1860.
28594	Moses, William P.	Exeter, N. H.	Currying knife.	June 5, 1860.
26858	Mosher, Eli.	Flushing, Mich.	Sap conductors.	Jan. 17, 1860.
27143	Mosher, William and Isaac H., and John J. Harris. Moss, William H., and V. Radspinner. (See Radspinner & Moss.)	Green, N. Y.	Tire, machine for bending.	Feb. 14, 1860.
27822	Mott, Isaac.	Glenn's Falls, N. Y.	Roof, laying slate.	April 10, 1860.
30885	Mowry, Samuel, and Eli Deppen.	Womelsdorf, Pa.	Planters, corn.	Dec. 11, 1860.
28595	Moyer, Daniel.	New Hamburg, Pa.	Planters, corn.	June 5, 1860.
27560	Moyer, Salomon. Moyer, William. (See Patton, William P., assignor.)	Shinersville, Pa.	Felloes, machine for bending.	Mar. 20, 1860.
30081	Mudge, S. W.	Rome, N. Y.	Washing machine.	Sept. 18, 1860.
27375	Mueller, Charles Gustave.	New York, N. Y.	Composition for extinguishing fires.	Mar. 6, 1860.
28996	Mueller, Hugo.	New York, N. Y.	Sewing machines.	July 3, 1860.
27734	Mullen, Thomas M.	Philadelphia, Pa.	Cars, framing of railroad.	April 8, 1860.
1227	Muller, Charles, assignor to John Matthews.	New York, N. Y.	Water coolers.	April 3, 1860.
29396	Munce, George.	St. Louis, Mo.	Cleaning windows, apparatus for.	July 31, 1860.
26916	Munger, George N. and George.	New Haven, Conn.	School slates.	Jan. 24, 1860.
27953	Munger, George, assignor to self and E. P. Dean.	New Haven, Conn.	Wood, machine for polishing.	April 17, 1860.
29092	Munger, N. Q.	Brookfield Centre, Wis.	Cesophagus tubes.	July 10, 1860.
27735	Munson, Edmund.	Utica, N. Y.	Mills, grinding.	April 3, 1860.
28768	Munson, Jehiel.	Burlington, Vt.	Composition for paste for attaching the coverings to piano forte hammers.	June 19, 1860.
30493	Murchison, Murdock.	Denmark, Tenn.	Presses, cotton.	Oct. 23, 1860.
1319	Murdock, Eliza A.	Boston, Mass.	Hat, lady's.	Oct. 2, 1860.
23093	Murdock, Richard.	Baltimore, Md.	Vehicles, running gear of.	July 10, 1860.

26698	Murphey & Allison. (See Allison, William C., assignor.)	New York, N. Y.	Gums, treating waste and inferior.	Jan. 3, 1860.
27144	Murphey, John. (See Allison, William C., assignor.)	Cincinnati, Ohio.	Cultivators	Feb. 14, 1860.
27733	Murphy, Thomas	Baltimore, Md.	Wheels for flying artillery carriages	April 3, 1860.
28240	Murphy, John D.	Philadelphia, Pa.	Girders, iron truss.	May 8, 1860.
30151	Murphy, John W., assignor to A. and P. Roberts	New York, N. Y.	Envelope, prepaid.	Sept. 25, 1860.
30980	Murray, John B.	New York, N. Y.	Envelopes	Dec. 18, 1860.
30831	Murray & Vedder. (See Vedder & Murray, assignors.)	New York, N. Y.	Dumb waiter	Dec. 4, 1860.
27334	Murtaugh, Andrew.	Lancaster, Pa.	Meat chopper.	Feb. 28, 1860.
26684	Musgrove, W. (See Kleinstelber, Albert, assignor.)	Richmondale, Ohio.	Planters, corn	June 12, 1860.
27465	Musselman, Henry D., assignor to self and William D. Sprecher.	Utica, N. Y.	Faucet, measure.	Mar. 13, 1860.
27145	Musselman, H. D., and William D. Sprecher et al. (See Swope, Zuriel, assignor.)	Philadelphia, Pa.	Mortising machine.	Feb. 14, 1860.
27646	Muth, John F., and William H. McCoy. (See McCoy & Muth.)	Brooklyn, N. Y.	Resin, manufacture of.	Mar. 27, 1860.
29511	Myers, D. C.	Maysville, Ky.	Water elevators.	Aug. 7, 1860.
30027	Myers, John M. (See Paine, Alvin R., assignor.)	Sandy Hill, N. Y.	Mitre box.	Sept. 11, 1860.
30981	Mynderse, Silsby & Co. (See Clapp, M. R., assignor.)	Somerville, Tenn.	Planters, cotton seed.	Dec. 18, 1860.
29300	Nalton, M. W.	Albany, N. Y.	Stove grates.	July 24, 1860.
30832	Nangel, Walter.	Niles Township, Ind.	Seeding machines.	Dec. 4, 1860.
29892	Napier, Henry.	Rahway, N. J.	Carriage seat, adjustable.	June 26, 1860.
29709	Nash, Hiram.	Rahway, N. J.	Carriages, extension seat for	Aug. 21, 1860.
29902	Nash, H. B., assignor to A. B. King.	Rahway, N. J.	Carriages, extension	Sept. 4, 1860.
27258	Nash, J. L., et al. (See Ballow, F. D., assignor.)	Mount Gilcard, Ohio.	Evaporating saccharine juices, apparatus for	Feb. 21, 1860.
29301	Nash, Richard C.	Lynn, Mass.	Stalls, horse, fire escape attachment for.	July 24, 1860.
27146	Nation, David H.	New Orleans, La.	Furnaces, bagasse	Feb. 14, 1860.
27823	Nauman, Reinhart, & Burnham. (See Burnham, G., assignor.)	Oscalosa, Iowa.	Tanning.	April 10, 1860.
30750	Nauman, William H., and G. S. Ball. (See Ball & Nauman.)	Strasburg, Pa.	Hay and straw cutters.	Nov. 27, 1860.
28191	Naylor, Fantly, H. and Armstid Ward	Pultney, N. Y.	Cultivators	May 8, 1860.
26951	Naylor, John A.	United States Navy	Wrench	Jan. 24, 1860.
29903	Naylor, John A.	Chillicothe, Ill.	Harrows	Sept. 4, 1860.
30751	Neal, Daniel B., and H. C. Emery, assignors to themselves and George E. House.	Lancaster County, Pa.	Cultivators	Nov. 27, 1860.
27203	Neal, David S.	Hamilton, Ohio.	Saw handles, fastening.	Feb. 28, 1860.
26952	Neames, Charles.	Boston, Mass.	Lamps	Jan. 24, 1860.
29302	Needham, David.	Boston, Mass.	Coffee pots	July 24, 1860.
30082	Neff, J. N.	Boston, Mass.	Lamps	Sept. 18, 1860.
27672	Neff, John, jr.	Burlington, Vt.	Wood bending machines.	Mar. 27, 1860.
28005	Neill, John E., assignor to E. S. Pomeroy.	Jackson, Ohio.	Adding numbers, machine for	April 24, 1860.
	Neill, Stewart			
	Neidich, John, and Elim R. Girvin.			
	Neimeyer, Jacob.			
	Neilson, George, assignor to Helmes, Booth & Hayden.			
	Neilson, George.			
	Neilson, George.			
	Nelson, C. L., and Oscar Bostwick, assignors to themselves and N. B. Proctor.			
	Nelson, David R.			

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
29810	Nelson, Henry G.	Lockport, N. Y.	Water wheels.	Aug. 28, 1860.
27824	Nelson, Mortimer.	New York, N. Y.	Saddles, riding.	April 10, 1860.
28293	Nelson, Samuel D.	Pittsburg, Pa.	Shovels, manufacture of.	May 15, 1860.
27376	Netherland, Jimpsy B.	Louisville, Ga.	Cultivators.	Mar. 6, 1860.
28893	Neumann, Caesar.	New York, N. Y.	Skirts, hoop, machines for making.	June 26, 1860.
30686	Nevers, Henry A., and Charles Ross	Claremont, N. H.	Churns.	Nov. 20, 1860.
27304	Nevin, John H.	Ogdensburg, N. Y.	Gates, device for opening and closing.	Feb. 28, 1860.
27377	Newbrough, David.	Clarksburgh, Ind.	Churn.	Mar. 6, 1860.
27868	Newbury, Frederick D., assignor to Richard V. De Witt, jr.	Albany, N. Y.	Fire-arms, revolving.	April 10, 1860.
30494	Newbury, Frederick D.	Albany, N. Y.	Fire-arms, revolving.	Oct. 23, 1860.
30340	Newcomb, Charles.	New York, N. Y.	Ventilation of railroad cars, apparatus for the.	Oct. 9, 1860.
26699	Newcomb, Thomas, and G. W. Byrd.	Smith's Fork, Tenn.	Cultivators, cotton.	Jan. 3, 1860.
30083	Newell, William.	Philadelphia, Pa.	Coffee, apparatus for cleaning, drying and polishing.	Sept. 18, 1860.
29188	Newland, T. J.	Walcott, Vt.	Corn shellers.	July 17, 1860.
27761	Newlove, Thomas, assignor to self, James Bowley, and T. Lynch, jr.	Chicago, Ill.	Sewing machines.	April 3, 1860.
29710	Newsom, Lewis.	Gallipolis, Ohio.	Heating rooms, device for.	Aug. 21, 1860.
29811	Newton, H. J., and U. C. Hill. (See Hill & Newton.)	Black Brook, N. Y.	Quilting frames.	Aug. 28, 1860.
28397	Newton, J. L.	Pittsburg, Pa.	Metal caps, &c., making sheet.	May 22, 1860.
1199	Newton, Orrin.			
	New York Car and Steamboat Gas Company. (See Law-son, O. L., assignor.)			
	New York Car and Steamboat Gas Company. (See Bid-son, O. L., assignor.)			
	New York Paraffine Candle Company. (See Menecl, An-tonio, assignor.)			
	New York Rubber Company. (See Alden, Henry A., as-signor.)			
	New York Rubber Company. (See Hinckley, Charles H., assignor.)			
1199	Ney, Elimer J., assignor to the Lowell Manufacturing Company.	Lowell, Mass.	Carpet patterns.	Feb. 14, 1860.
1209	Ney, Elimer J., assignor to the Lowell Manufacturing Company.	Lowell, Mass.	Carpet patterns.	Feb. 28, 1860.
1210	Ney, Elimer J., assignor to the Lowell Manufacturing Company.	Lowell, Mass.	Carpet patterns.	Feb. 28, 1860.
1253	Ney, Elimer J., assignor to the Lowell Manufacturing Company.	Lowell, Mass.	Carpet patterns.	June 12, 1860.
1254	Ney, Elimer J., assignor to the Lowell Manufacturing Company.	Lowell, Mass.	Carpet patterns.	June 12, 1860.
1299	Ney, Elimer J., assignor to the Lowell Manufacturing Company.	Lowell, Mass.	Carpet patterns.	Aug. 7, 1860.
1300	Ney, Elimer J., assignor to the Lowell Manufacturing Company.	Lowell, Mass.	Carpet patterns.	Aug. 7, 1860.

1301	Ney, Ellmer J., assignor to the Lowell Manufacturing Company.	Lowell, Mass.	Carpet patterns.....(Design).....	Aug. 7, 1860.
1321	Ney, Ellmer J., assignor to the Lowell Manufacturing Company.	Lowell, Mass.	Carpets.....(Design).....	Oct. 2, 1860.
1353	Ney, Ellmer J., assignor to the Lowell Manufacturing Company.	Lowell, Mass.	Carpets.....(Design).....	Dec. 18, 1860.
1354	Ney, Ellmer J., assignor to the Lowell Manufacturing Company.	Lowell, Mass.	Carpets.....(Design).....	Dec. 18, 1860.
1355	Ney, Ellmer J., assignor to the Lowell Manufacturing Company.	Lowell, Mass.	Carpets.....(Design).....	Dec. 18, 1860.
1356	Ney, Ellmer J., assignor to the Lowell Manufacturing Company.	Lowell, Mass.	Carpets.....(Design).....	Dec. 18, 1860.
1357	Ney, Ellmer J., assignor to the Lowell Manufacturing Company.	Lowell, Mass.	Carpets.....(Design).....	Dec. 18, 1860.
1358	Ney, Ellmer J., assignor to the Lowell Manufacturing Company.	Lowell, Mass.	Carpets.....(Design).....	Dec. 18, 1860.
1359	Ney, Ellmer J., assignor to the Lowell Manufacturing Company.	Lowell, Mass.	Carpets.....(Design).....	Dec. 18, 1860.
1360	Ney, Ellmer J., assignor to the Lowell Manufacturing Company.	Lowell, Mass.	Carpets.....(Design).....	Dec. 18, 1860.
1361	Ney, Ellmer J., assignor to the Lowell Manufacturing Company.	Lowell, Mass.	Carpets.....(Design).....	Dec. 18, 1860.
30640	Nicholls, L. W.	North Brookfield, N. Y.	Odometers.....	Nov. 13, 1860.
26700	Nichols, Daniel.	Onargo, Ill.	Planters, corn.....	Jan. 3, 1860.
29512	Nichols, Ebenezer W.	Worcester, Mass.	Polishing wheel, holder for.....	Aug. 7, 1860.
28398	Nichols, Henry L.	New York, N. Y.	Carpet cleaner.....	May 22, 1860.
30418	Nichols, Henry L.	New York, N. Y.	Slivering machines.....	Oct. 16, 1860.
27192	Nicholson, David, assignor to self and Charles R. Fox.	Lockport, N. Y.	Shingle machines, method of feeding the bolt to the knife in.....	Feb. 14, 1860.
28104	Nicholson, William T.	Providence, R. I.	Levels, spirit.....	May 1, 1860.
30152	{ Nicholson, William T., and T. Earle..... }	Providence, R. I.	Egg beater.....	Sept. 25, 1860.
28192	Nickerson, Reuben, and Albert B. Colton.	Smithfield, R. I.	Cocks, valve.....	May 8, 1860.
30833	Nickerson, S. A., et al. (See Patten, Samuel P., assignor.)	Athens, Ga.	Railroad car frames and trucks with metallic joints, constructing.....	Dec. 4, 1860.
28596	Nicoll, Robert.	Alexandria, Va.	Cocks, stop.....	June 5, 1860.
28997	Nichaus, Frederick William.	New York, N. Y.	Piano-forte action.....	July 3, 1860.
29711	Niles, Elon G.	Boston, Mass.	Range, cooking.....	Aug. 21, 1860.
28597	Niles, Peter H.	Cincinnati, Ohio.	Cup, drinking, telescopic.....	June 5, 1860.
28294	Nims, J. A., et al. (See Corser, S. A., assignor.)	Boston, Mass.	Potato diggers.....	May 15, 1860.
30938	Niven, David.	Rochester, N. Y.	Hogs from rooting, device for preventing.....	Dec. 18, 1860.
28543	Nixon, D. K.	Sandyville, Ohio.	Desulphurizing coke.....	May 29, 1860.
27561	Noble & Abbott. (See Smith & Brown, assignors.)	Pittsburg, Pa.	Boot crimping machine.....	Mar. 20, 1860.
20982	Nock, George, assignor to T. G. Nock.	Paulsboro', N. J.	Hulling clover seed, machines for.....	Dec. 18, 1860.
28998	Nock, T. G. (See Nock, George, assignor.)	Milton, Pa.	Pianos, tuning.....	July 3, 1860.
26701	Nolen, John S., and Charles C. Hinchman.	Berryville, Va.	Bollers, steam.....	Jan. 3, 1860.
28007	Noraconk, M. F., and Daniel Hoats.	Philadelphia, Pa.	Wheels, guide, for locomotives.....	April 24, 1860.
	Norris, John B.	Philadelphia, Pa.		
	Norris, Septimus			
	Norris, Septimus			
	North American Paper bag and Envelope Manufacturing Company. (See Pettee, S. E.)			
	North, Chase & North. (See Gibbs, S. W., assignor.)			

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
27466	North, Chase & North. (See Vedder, N. S., assignor.)	Middletown, Conn.	Drop letter boxes	Mar. 13, 1860.
30084	North, Chase & North. (See Smith & Brown, assignors.)	Middletown, Conn.	Harness, snap hook for	Sept. 18, 1860.
30687	North, John	Middletown, Conn.	Mousing hook	Nov. 20, 1860.
30103	North, John	Middletown, Conn.	Padlock	Dec. 18, 1860.
30085	Norton, George M.	San Francisco, Cal.	Amalgamator	Sept. 18, 1860.
29299	Norville, H. W.	Livingston, Ala.	Wagon brake	July 24, 1860.
29712	Norville, H. W.	Livingston, Ala.	Car brake	Aug. 21, 1860.
27647	Notestein, A. S., assignor to self and L. I. Rogers.	Salem, Iowa	Seeding machines	Mar. 27, 1860.
28008	Nourse, G. D., et al. (See Wilcox, Elijah D.)	Newark, N. J.	Combs	April 24, 1860.
27597	Noyes, Elfmeco M.	Gardiner, Me.	Wood to slivers, machine for reducing	Mar. 20, 1860.
28637	Noyes, William H., assignor to Gideon S. Palmer.	Boston, Mass.	Gauge for filling barrels	June 5, 1860.
27648	Noyes, William H., assignor to Harvey T. Litchfield.	Gowanda, N. Y.	Tanning leather, compositions for	Mar. 27, 1860.
28399	Nuessley, Jacob	East Boston, Mass.	Sallyards, top, hanging	May 22, 1860.
28400	Nute, James			
28400	Nutt, John, and W. Millar. (See Millar, W.)	Elmira, N. Y.	Auger, hollow	May 22, 1860.
30495	Nye, G. M., and A. T. Haviland	New York, N. Y.	Printing, plate	Oct. 23, 1860.
29987	Oakes, W. H.	Morrisville, Vt.	Washing machine	Sept. 11, 1860.
26702	Ober, C. D. and S. M.	Tiffin, Ohio	Car brakes, railroad	Jan. 3, 1860.
28295	Obermiller, M.	Booneville, Mo.	Flues, construction of	May 15, 1860.
30086	O'Brien, Robert F.	Lancaster, Pa.	Ore washer	Sept. 18, 1860.
28559	O'Bryan, Bearnard			
28559	O'Connor, Thomas J., and W. S. Williams. (See Williams, W. S., assignor.)	New York, N. Y.	Vehicles, attaching thills to	Jan. 17, 1860.
27562	Odell, Adam	New York, N. Y.	Vehicles, attaching thills to	Mar. 20, 1860.
29549	Odell, Francis	Baltimore, Md.	Registers, omnibus, self locking device for	Aug. 7, 1860.
29094	Offley, Michael, assignor to self and William Colton	Greenfork, Ind.	Cultivators	July 10, 1860.
28612	Ogborn, Harrison			
28612	Olcott & Payne. (See Priston & Farnham, assignors.)	New York, N. Y.	Preserving meats	June 19, 1860.
28394	Oliver, Gilbert W., assignor to Henry Parker and Colin W. Yale.			
28394	Ollis, John	Broomington, Ill.	Harvesters, automatic rakes for	June 26, 1860.
29513	Olmstead, Joseph, and William A. Walker.	Victoria, Ill.	Tire, machine for upsetting	Aug. 7, 1860.
26860	Olmstead, Samuel J.	Binghamton, N. Y.	Tin ware, machine for manufacture of	Jan. 17, 1860.
27024	Olmsted, Kingsley R., assignor to Giles F. Filley	Chicago, Ill.	Sawing machines	Jan. 31, 1860.
30496	O'Neill, William H., et al. (See Gluyas, Wm., ass'r.)	Minnetto, N. Y.	Car coupling	Oct. 23, 1860.
29904	Oot, Adam	Scarboro', Ga.	Press, cotton	Sept. 4, 1860.
27147	Opie, W. T.	United States Army	Projectiles, giving them rotation, application of gunpowder to flat.	Feb. 14, 1860.
29896	Oppenheimer & Dinkelspiel. (See Wild, Albert, ass'r.)			
27147	Ord, Edward O. C.			
29896	Ordway, Alanson	Stratham, N. H.	Tuyere	May 15, 1860.

29905	Ormsbee, Elhanan W.	Montpelier, Vt.	Sap from trees, apparatus for collecting.	Sept. 4, 1860.
27649	Orne, E. T.	Boston, Mass.	Gas regulators	Mar. 27, 1860.
27463	Orton, B. E.	Lyndon, Ill.	Mills, mode of applying horse power to	Mar. 13, 1860.
	Orvis, Abraham. (See Bellow's, C. R., assignor.)			
	Orvis, Isaac, administrator of L. M. Orvis, deceased. (See Smith & Orvis.)			
27467	Osborn, George W.	Centreville, Mich.	Grain cleaners	Mar. 13, 1860.
29906	Osborn, John	Mt. Carmel, Conn.	Aqueducts	Sept. 4, 1860.
	Osborne, David M. (See Urmey, Jesse.)			
	Osborne, David M., & Co. (See Bartlett, George C., ass'r.)			
	Osgood, J. C., et al. (See Carmichael, D., deceased, by E. Carmichael.)			
30240	Otis, Charles R.	Yonkers, N. Y.	Engines, oscillating.	Oct. 2, 1860.
30241	Otis, E. G.	Yonkers, N. Y.	Engines, oscillating.	Oct. 2, 1860.
26876	Otis, Frederick S., assignor to A. B. Chapin	Brooklyn, N. Y.	Bustle hoop, clasp for the ends of.	Jan. 17, 1860.
28598	Otis, Frederick S.	Brooklyn, N. Y.	Skirts, skeleton, device for manufacturing	June 5, 1860.
28940	Otner, Joseph, assignor to P. and F. Corbin	New Britain, Conn.	Handles, lifting	June 26, 1860.
30540	Outram, John	Elmira, N. Y.	Grain, machines for cleaning.	Oct. 30, 1860.
28895	Overend, Andrew	Philadelphia, Pa.	Paper, machine for wetting.	June 26, 1860.
29095	Oviatt, S. E.	Richfield, Ohio	Threshing machines	July 10, 1860.
28896	Owen, Benjamin	Dayton, Ohio	Planters, cotton seed	June 26, 1860.
28401	Oyston, Charles	Little Falls, N. Y.	Press, power	May 22, 1860.
28402	Packer, Charles W.	Philadelphia, Pa.	Freezers, ice cream	May 22, 1860.
30752	Paddock, Oscar	Watertown, N. Y.	Furnaces, hot air	Nov. 27, 1860.
30585	Paddock, Walter W.	Cincinnati, Ohio	Cans, sealing preserve	Nov. 6, 1860.
	Paddon, J. W., et al. (See Clark, Elisha, assignor.)			
29189	Paff, John	Eden, N. Y.	Churn	July 17, 1860.
30688	Page, Charles G.	Washington, D. C.	Aural instruments	Nov. 20, 1860.
27563	Page, Clark D.	Rochester, N. Y.	Composition for artificial stone	Mar. 20, 1860.
	Page, J. H. W., and D. Greene. (See Greene, D., ass'r.)			
	Page, Nathaniel C. (See Chase, Amos, assignor.)			
27412	Paine, Alvin R., assignor to John M. Myers	New York, N. Y.	Sewing machines	Mar. 6, 1860.
29096	Paine, W. H.	Sheboygan, Wis.	Surveyor's tackle case	July 10, 1860.
29514	Paine, William H.	Sheboygan, Wis.	Surveyor's measure	Aug. 7, 1860.
26781	Palmenberg, Joseph R.	New York, N. Y.	Frame for ladies' dresses	Jan. 10, 1860.
	Palmer, A., et al. (See Seymour, William H., assignor.)			
	Palmer, Albert. (See Henley, Henry W., assignor.)			
27469	Palmer, F. I.	Knoxville, Tenn.	Car seats	Mar. 13, 1860.
28599	Palmer, George	Littlestown, Pa.	Pumps	June 5, 1860.
29306	Palmer, George	Littlestown, Pa.	Carriage springs, adjustable	July 24, 1860.
	Palmer, G. S. (See Noyes, William H., assignor.)			
27007	Palmer, Isaac E.	Montville, Conn.	Bed canopy	Jan. 31, 1860.
29550	Palmer, John, assignor to self and John F. Draper	Fort Scott, Kansas	Vinegar, manufacture of	Aug. 7, 1860.
30341	{ Palmer, John W., and John K. Leedy	Port Republic, Va. Tomsbrook, Va.	Beehives	Oct. 9, 1860.
27305	Palmer, Mark S.	New Bedford, Mass.	Fishing reels	Feb. 28, 1860.
	Palmer, Seymour, Morgan & Williams. (See St. John, J. A., assignor.)			
28297	Palmer, Sidney W. and Josiah F.	Auburn, N. Y.	Silk or thread reels	May 15, 1860.
27564	Palser, J. B., and G. Howland	Fort Edward, N. Y.	Preparation of straw for paper pulp	Mar. 20, 1860.
29308	Pancoast, S. (See Fetter, George, assignor.)			
30342	Pangborn, Charles T.	Brooklyn, N. Y.	Boilers, steam, alarm water gauge for	July 24, 1860.
	Parce, J. Y.	Fairport, N. Y.	Press, packing	Oct. 9, 1860.

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
1293	Pardee, Benjamin S.	Mt. Carmel, Conn.	Hub bands.	July 31, 1860.
29907	Park, A. R.	Columbia, Texas	Seeding machines.	Sept. 4, 1860.
28105	Park, David E. and James, jr. (See Smith, William, ass't.)	Marlboro', N. Y.	Basket.	May 1, 1860.
29397	Park, Jesse K.	Joliet, Ill.	Churn.	July 31, 1860.
29515	Parker, Ed., Benjamin, and Thomas S.	Schenectady, N. Y.	Lubricator.	Aug. 7, 1860.
27064	Parker, Emery.	West Meriden, Conn.	Bolts for door locks.	Feb. 7, 1860.
	Parker, Henry, and Colin W. Yale. (See Oliver, Gilbert W., assignor.)			
28328	Parker, James H., assignor to E. H. Ashcroft.	Boston, Mass.	Drill, hand.	May 15, 1860.
28327	Parker, James H., assignor to E. H. Ashcroft.	Boston, Mass.	Drill, hand.	May 15, 1860.
30586	Parker, J. Edward.	West Meriden, Conn.	Lock, door.	Nov. 6, 1860.
29988	Parker, J. J.	Marietta, Ohio.	Apple parer, corer, and slicer.	Sept. 11, 1860.
27065	Parker, John and Edmund.	Meriden, Conn.	Mills, coffee.	Feb. 7, 1860.
29190	Parker, Leonard.	Winterset, Iowa.	Trap, rat.	July 17, 1860.
	Parker, Thomas, et al. (See Pratt, Ira C., assignor.)			
30948	Parkinson, Andrew, assignor to James Parkinson.	Norwich, Conn.	Looms.	Dec. 18, 1860.
26861	Parneelee, Dubois D., assignor to John A. Green.	Salem, Mass.	Elastic hollow moulded articles, manufacture of.	Jan. 17, 1860.
30181	Parneelee, Dubois D., assignor to the Beverly Rubber Company, assignors to John H. Cheever.	Salem, Mass.	Rubber, restoring waste vulcanized.	Sept. 25, 1860.
29908	Parneelee, Homer.	Philadelphia, Pa.	Pipes, moulding metal.	Sept. 4, 1860.
30182	Parnell, James W., assignor to James Morrison, jr.	Troy, N. Y.	Stove grate.	Sept. 25, 1860.
27233	Parrish, Elias and Watson, jr.	Galesburg, Ill.	Ploughs, mole.	Feb. 21, 1860.
28897	Parrish, Nathan, assignor to George B. Peters.	Galesburg, Mich.	Stump extractor.	June 26, 1860.
29307	Parrot, William P.	Boston, Mass.	Gauge, steam pressure.	July 24, 1860.
27306	Parrott, G. W.	Lynn, Mass.	Sole cutting machines.	Feb. 28, 1860.
28499	Parrott, William P.	Boston, Mass.	Ores, machine for crushing mineral.	May 29, 1860.
27307	Parsons, Charles B.	Burr Oak, Mich.	Motion, converting reciprocating into rotary.	Feb. 28, 1860.
29516	Parsons, John.	Cleveland, Ohio.	Drain tiles, bottom plates for.	Aug. 7, 1860.
30541	Parsons, John.	Cleveland, Ohio.	Brick machines.	Oct. 30, 1860.
27148	Parsons, Josephus.	Carthage, Ohio.	Engines, rotary steam.	Feb. 14, 1860.
29039	Pattee, Lester, assignor to self and Abram H. Ryan.	Peoria, Ill.	Soldering irons.	July 3, 1860.
27149	Patrick, W. A.	Ludlow, Vt.	Lathes, method of operating feed nuts in.	Feb. 14, 1860.
26703	Patric, Edward.	Livingston, N. Y.	Soap, composition for.	Jan. 3, 1860.
28898	Patten, John W., and Griffith P. Terry.	Albany, N. Y.	Fire escape.	June 26, 1860.
30607	Patten, Samuel P., assignor to self and S. A. Nickerson.	New York, N. Y.	Windlass, capstan.	Nov. 6, 1860.
	Patterson, A. H., and George Collyer. See Collyer & Patterson.)			
29713	Patterson, David P.	Fayette County, Pa.	Distillers' mash tubs, construction of.	Aug. 21, 1860.
29398	Patterson, E. H. (See Hendry, T. C., assignor.)			
27825	Patterson, Jacob M.	Woodbury, N. J.	Lightning rods, construction of.	July 31, 1860.
27150	Patterson, J. M., and J. F. Morell.	Woodbury, N. J.	Threshing machine.	April 10, 1860.
	Patterson, N. A.	Kingston, Tenn.	Harrows.	Feb. 14, 1860.
	Patterson, N. A., and W. S. McEwen. (See McEwen & Patterson.)			

29714	Patterson, N. A., and William N. Ramsay	Kingston, Tenn.	Washing machine	Aug. 21, 1860.
29812	Patterson, N. A.	Kingston, Tenn.	Separators, grain	Aug. 28, 1860.
30497	Patterson, N. A.	Kingston, Tenn.	Gin, cotton	Oct. 23, 1860.
26820	Patton & Flowers. (See Knight, Joseph J., ass'r.)	Harrisburg, Pa.	Cans, preserve, stopper for	Jan. 10, 1860.
30753	Pauli, William P., assignor to self and William Moyer.	Alexandria, Va.	Heaters for railroad cars	Nov. 27, 1860.
28769	Paulsen, Herman G. C.	New York, N. Y.	Sugar, clarifying	June 19, 1860.
30108	Paulsen, Herman G. C., assignor to Horatio N. Fryatt	New York, N. Y.	Sugar, refining	Sept. 18, 1860.
28899	Pavyer, James G.	St. Louis, Mo.	Type, machine for scouring	June 26, 1860.
	Pawtucket Hair Cloth Company. (See Angell, Isaac, assignor.)			
	Paxson, N. B., and R. O. Meldrum. (See Meldrum & Paxson.)			
27826	Paxson, Jacob L.	Norristown, Pa.	Harvesters	April 10, 1860.
27378	Paxson, John J.	Middletown, Ind.	Cultivators	Mar. 6, 1860.
30343	Paye, Edward, assignor to self and C. H. Dalamater.	New York, N. Y.	Hammers, forge	Oct. 9, 1860.
	Payne & Olcotts. (See Priston & Farnham, assignors.)			
30641	Payne, R. S.	Chicago, Ill.	Sewing machines	Nov. 13, 1860.
29399	Peach, Edward	Utica, N. Y.	Awning fixtures	July 31, 1860.
30642	Pearson, Charles W.	Charlestown, Mass.	Swifts	Nov. 13, 1860.
30754	Pearson, Sewell	Boston, Mass.	Sofa and bedstead	Nov. 27, 1860.
27470	Pease, F. S.	Buffalo, N. Y.	Hydro-carbon vapor apparatus	Mar. 13, 1860.
29989	Pease, Henry	Brockport, N. Y.	Pumps	Sept. 11, 1860.
	Pease, Julius. (See Ustick, Stephen, assignor.)			
27827	Pease, W. H.	Goshen, Ind.	Carving marble, &c., machine for	April 10, 1860.
30929	Pease, W. H.	Dayton, Ohio	Tobacco cutters	Dec. 18, 1860.
27471	Peatfield, James and Sanford	Ipswich, Mass.	Beltting, elastic	Mar. 13, 1860.
27151	Peck, Edmund	San Jose, Cal.	Harvesters	Feb. 14, 1860.
1287	Peck, Elvathan	New Britain, Conn.	Gridiron	July 17, 1860.
26954	Peck, James W., jr., assignor to self and L. B. Hauxhurst.	Brooklyn, N. Y.	Spring, belical	Jan. 24, 1860.
	Peck, L. C., and H. M. Bearce. (See Bearce & Peck.)			
27925	Peck, Milo	New Haven, Conn.	Hammers, atmospheric	April 17, 1860.
29910	Peck, Milo and Charles	New Haven, Conn.	Drop presses	Sept. 4, 1860.
26704	Peck, Nelson	Wilmington, N. Y.	Scraper, road	Jan. 3, 1860.
	Peck Smith Manufacturing Co. (See Plumb, S. R., assignor.)			
26705	Peck, Walter	Rockford, Ill.	Pumps	Jan. 3, 1860.
28193	Peck, Walter	Rockford, Ill.	Pumps	May 8, 1860.
28770	Peck, Walter	Rockford, Ill.	Wind mills	June 19, 1860.
29517	Peckham, John S. and Merritt.	Utica, N. Y.	Stoves	Aug. 7, 1860.
	Peckham, John S. and Merritt. (See Vedder, N. S., assignor.)			
	Peckham, W. H., and E. W. Gordon. (See Gordon & Peckham.)			
30542	Peckham, William H.	Hoboken, N. J.	Boots and shoes, heels for	Oct. 30, 1860.
	Peckover, J., and F. C. Adams. (See Adams & Peckover.)			
	Peddle, Thomas B., and John Morrison. (See Dunham, Theodore R., assignor.)			
28009	Peeler, James	Tallahassee, Fla.	Ploughs, seeding	April 24, 1860.
27234	Peikhardt, John F. C.	New York, N. Y.	Bedstead, sofa	Feb. 21, 1860.
1228	Peirce, Francis J., assignor to the Roxbury Carpet Co.	Lowell, Mass.	Carpets	April 3, 1860.
	Pelham, A., et al. (See Burr, D. Theodore, assignor.)			

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
30153	Pelham, Isaac.....	Ithaca, N. Y.....	Saws, cross-cut, method of attaching handles to.....	Sept. 25, 1860.
30342	Pellet, August.....	Paris, France.....	Ornamenting leather cloth, process of.....	Oct. 2, 1860.
30243	Pelletrean, Maltby K.....	New York, N. Y.....	Press, standing, book binder's.....	Oct. 2, 1860.
	Pelouze, H. L., and O. F. Grover. (See Grover & Pelouze.)			
28771	Pelton, O. Z.....	Middletown, Conn.....	Pitcher, beer.....	June 19, 1860.
27235	Penn, Worden P.....	Belleville, Ill.....	Horse powers.....	Feb. 21, 1860.
27379	Penn, Worden P.....	Belleville, Ill.....	Seeding machines.....	Mar. 6, 1860.
28010	Penn, Worden P.....	Belleville, Ill.....	Harvesters, rakes for.....	April 24, 1860.
29191	Penn, Worden P.....	Belleville, Ill.....	Seeding machines.....	July 17, 1860.
28500	Pennell, O. J.....	Williamsport, Pa.....	Renovating feathers, apparatus for.....	May 29, 1860.
30587	Pennie, Henry.....	Buffalo, N. Y.....	Hinge, stop.....	Nov. 6, 1860.
26706	Penniston, George W.....	North Vernon, Ind.....	Presses.....	Jan. 3, 1860.
29813	Pennoyer, David.....	North East, N. Y.....	Car seats and couches.....	Aug. 28, 1860.
28999	Penny, T. J., and W. B. Botsford.....	Wooster, Ohio.....	Sewing machines.....	July 3, 1860.
30087	Peoples, Daniel K.....	Philadelphia, Pa.....	Paddle wheel, stern.....	Sept. 18, 1860.
	Peree, Elbert, <i>et al.</i> (See Callender, M. L., assignor.)			
30154	Perego, Ira, jr.....	New York, N. Y.....	Shirt bosoms.....	Sept. 25, 1860.
30689	Perkins, Charles H.....	Providence, R. I.....	Horse shoes, machine for punching.....	Nov. 20, 1860.
33305	Perkins, Jacob Marsh.....	Chicago, Ill.....	Water wheels.....	July 24, 1860.
30344	Perkins, Jacob Marsh.....	Chicago, Ill.....	Seats, pic-nic or excursion.....	Oct. 9, 1860.
27926	Perkins, Jonas, assignor to N. S. C. Perkins.....	Braintree, Mass.....	Sewing machine, driving mechanism for.....	April 17, 1860.
	Perkins, Samuel H., and John S. Arvin. (See Arvin & Perkins.)			
29990	Perley, Charles.....	New York, N. Y.....	Windlass, vertical, ship's.....	Sept. 11, 1860.
30755	Perley, Charles.....	New York, N. Y.....	Hawse pipes.....	Nov. 27, 1860.
29911	Pernot, August.....	Chilton, Wis.....	Shingles, machine for sawing.....	Sept. 4, 1860.
	Perrige, M., <i>et al.</i> (See Pittock, George W., assignor.)			
27565	Perry, John G.....	South Kingston, R. I.....	Sausage, machine for filling.....	Mar. 20, 1860.
27828	Perry, John G.....	South Kingston, R. I.....	Sausage stuffer.....	April 10, 1860.
28298	Perry, John G.....	South Kingston, R. I.....	Sausage machine.....	May 15, 1860.
28900	Perry, John G.....	South Kingston, R. I.....	Sausage filler.....	June 26, 1860.
29400	Perry, John G.....	South Kingston, R. I.....	Meat cutter.....	July 31, 1860.
29814	Perry, John G.....	South Kingston, R. I.....	Sausage filler.....	Aug. 28, 1860.
30088	Perry, John G.....	South Kingston, R. I.....	Meat cutter.....	Sept. 18, 1860.
29715	Perry, Samuel J.....	Columbia, S. C.....	Boiler tubes, drawing.....	Aug. 21, 1860.
	Peterson & Stuart. (See Martino & Horton, assignors.)			
	Peterson & Stuart. (See Cantelo, W. I., assignor.)			
	Peterson & Stuart. (See Horton & Martino, assignors.)			
	Peterson, R., and D. Stuart. (See Mahan, John L., assignor.)			
28537	Petree, Samuel. (See Buckins, H., assignor.)	Philadelphia, Pa.....	Paper bag machine.....	May 29, 1860.
28299	Pettee, S. E., assignor to the North American Paper-bag and Envelope Manufacturing Co.	Norfolk, Conn.....	Lamps, vapor.....	May 15, 1860.
30690	Pettibone, Ira W.....	Corunna, Mich.....	Separator, grain.....	Nov. 20, 1860.

30345	Pettingell, John.....	Lowell, Mass.....	Chimney tops, iron.....	Oct. 9, 1860.
30756	Petit, John P.....	Cold Spring, Ky.....	Ploughs.....	Nov. 27, 1860.
29097	Phelan, M., et al. (See Ellicott, James, P., assignor.)	Troy, N. Y.....	Clocks, pendulum.....	July 10, 1860.
29000	Phelps, George M.....	Sycamore, Ill.....	Motion to machinery, transmitting.....	July 3, 1860.
29001	Phelps, William.....	Sycamore, Ill.....	Axles, car.....	July 3, 1860.
30244	Phelps, William, et al. (See Wright & Phelps.)	Sycamore, Ill.....	Washing machine.....	Oct. 2, 1860.
27380	Phenix, William, and Clark Wright.....	New Brunswick, N. J.....	Washing machine.....	Mar. 6, 1860.
29401	Phillippi, Abraham H.....	Reading, Pa.....	Gas regulators for railroad cars.....	July 31, 1860.
29002	Phillips, B. F., & Co. (See Clarkson & Tellotson, assignors.)	Providence, R. I.....	Engraving copper cylinders, machines for.....	July 3, 1860.
27193	Phillips, Benjamin L.....	Cambridgeport, Mass.....	Skates, manufacture of.....	Feb. 14, 1860.
28300	Phillips, Enos B., assignor to self and Charles W. Phillips.	Newark, N. J.....	Wrench.....	May 15, 1860.
30657	Phillips, George B.....	Seneca Falls, N. Y.....	Water from wells, apparatus for drawing.....	Nov. 13, 1860.
27650	Phillips, H. F., assignor to Downs & Co.....	Half Moon, N. Y.....	Mills, elder.....	Mar. 27, 1860.
29309	Philo, E. H., assignor to Charles E. Pease.....	Dayton, Ohio.....	Cocks.....	July 24, 1860.
30887	Pickering, Barton.....	Augusta, Ga.....	Fertilizers, machine for sowing.....	Dec. 11, 1860.
28685	Picquet, B.....	Cincinnati, Ohio.....	Bollers, steam, feed-water apparatus for.....	June 12, 1860.
30538	Pierce, Charles S., et al. (See Short, Levi, assignor.)	Millport, N. Y.....	Smut machines.....	Oct. 30, 1860.
28901	Pierce, Elisha, and Amos P. Spaulding. (See Spaulding & Pierce.)	Jeffersonville, Ind.....	Troughs, eave, making.....	June 26, 1860.
30930	Pierce, H. L.....	Syracuse, N. Y.....	Churn.....	Dec. 18, 1860.
30346	Pierce, Jonathan, et al. (See Ruddick, Hamilton, ass't.)	Chelsea, Mass.....	Jack, carriage.....	Oct. 9, 1860.
30543	Pierion, Ludlow.....	Laurel, Md.....	Warp, machines for dressing.....	Oct. 30, 1860.
30347	Pike, John.....	New York, N. Y.....	Heating railroad cars, apparatus for.....	Oct. 9, 1860.
30543	Pike, John P., and Seth Fletcher. (See Fletcher & Pike.)	New York, N. Y.....	Ship building.....	Sept. 4, 1860.
30347	Pike, John J.....	Hartford, Conn.....	Steam radiators.....	June 12, 1860.
29912	Pilson, Robert.....	Hartford, Conn.....	Lamps or torches, swinging, frame for.....	Sept. 18, 1860.
28686	Pine, Joseph.....	Bushwick, N. Y.....	Rope, machinery for laying.....	Jan. 24, 1860.
30089	Pinner, Debby, and C. A. Adams. (See Wiswell, Daniel H.)	Union Mills, N. Y.....	Griddles.....	Sept. 11, 1860.
29684	Pionnier, S. L.....	Union Mills, N. Y.....	Sifters, coal.....	Dec. 18, 1860.
30028	Pirky, John, et al. (See Baker, A., assignor.)	Troy, N. Y.....	Sawing machine.....	July 3, 1860.
30983	Pitkin, A. P.....	Sumter, S. C.....	Fences.....	Oct. 30, 1860.
29003	Pitkin, Leonard T.....	Sumter, S. C.....	Limbs, fractured, apparatus for.....	Nov. 6, 1860.
28329	Pittman, George W., assignor to self and Wm. C. Boone.....	Austin, Texas.....	Planters, seed.....	May 15, 1860.
25707	Pitcock, George W., assignor to Isaac Brown and Joseph Bowman.	Austin, Texas.....	Ploughs.....	May 15, 1860.
28403	Pitlock, George W., assignor to self and M. Perrige.....	New York, N. Y.....	Pulleys, grooved.....	Jan. 3, 1860.
29224	Pitts, Carey.....	New York, N. Y.....	Motion, converting reciprocating into intermittent rotary.....	May 22, 1860.
29614	Pitts, James M.....	New York, N. Y.....	Sewing machines, shuttles for.....	July 17, 1860.
28772	Pitts, J. M.....	Plantsville, Conn.....	Carriages, attaching thills to.....	Aug. 14, 1860.
30090	Pitts, W. C.....	New York, N. Y.....	Needles, machine for making.....	June 19, 1860.
	Pitts, William C., assignor to William A. Pitts.....	St. Louis, Mo.....	Grain, machines for scouring, cleaning, and polishing.....	Sept. 18, 1860.

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
30498	Plant, George P., and Julius Raith	St. Louis, Mo.	Millstones, ventilating	Oct. 23, 1860.
26862	Platt, Anson H.	Cincinnati, Ohio.	Soap	Jan. 17, 1860.
29441	Platt, Harvey, and W. T. Huntington. (See Mix, E. M. and J. E., assignors.)	Danbury, Conn.	Hat bodies, machine for forming	July 31, 1860.
27066	Platt, John R., <i>et al.</i> (See Broughton, Albert, assignor.)	Jackson, Miss.	Life preserver	Feb. 7, 1860.
27381	Platt, Norman	New York, N. Y.	Valves, slide, for steam engines	Mar. 6, 1860.
30931	Plews, Robert	Smithfield, R. I.	Cylinders for spinning frames	Dec. 18, 1860.
28600	Plympton, C. G. and H. M.	Walpole, Mass.	Steel springs, tempering	June 5, 1860.
27152	Plumb, C. M.	North Orange, N. J.	Time table for railroads, &c.	Feb. 14, 1860.
27829	Plumb, Salmon R.	Southington, Conn.	Sausage stuffer	April 10, 1860.
29440	Plumb, Salmon R., assignor to the Peck Smith Manufacturing Company.	Southington, Conn.	Casting cylinders for meat cutters	July 31, 1860.
29225	Plumer, John C., assignor to self and David Robinson, jr.	Portland, Me.	Last, shoemaker's	July 17, 1860.
28773	Poissonnier, H.	New York, N. Y.	Composition for silvering mirrors	June 19, 1860.
1232	Polhamus, John	New York, N. Y.	Spoon handles, &c.	April 10, 1860.
1342	Polhamus, John	New York, N. Y.	Spoons, forks, &c., handles of	Nov. 13, 1860.
27736	Pollock, Julius	Morrisania, N. Y.	Hats, ventilators for	April 3, 1860.
30643	Pollock, Julius	Morrisania, N. Y.	Hats, ventilating, sweat leather for	Nov. 13, 1860.
30348	Pollock, William G., and J. W. Sener	Fredericksburg, Va.	Planters, seed	Oct. 9, 1860.
26923	Pomeroy, C. S. (See Neill, John E., assignor.)	New York, N. Y.	Iron, smelting and refining	Jan. 24, 1860.
29909	Pomeroy, Ebenezer G.	New York, N. Y.	Iron into steel, method of converting	Sept. 4, 1860.
28687	{ Pomeroy, H. A. G., and R. F. Hudson.	Providence, R. I.	Ploughs	June 12, 1860.
28404	Pond, Joseph F.	Hartford, Conn.	Washing machine	May 22, 1860.
28302	Pond, Josiah S.	Cleveland, Ohio	Washing machine	May 15, 1860.
27153	Pope, Charles	Cleveland, Ohio	Evaporating saline liquors, apparatus for	Feb. 14, 1860.
30834	Popp, John George	Syracuse, N. Y.	Lotions, medicated	Dec. 4, 1860.
30419	Port, Henry, and Eugene Surgi	Vienna, Austria	Boots and shoes	Oct. 16, 1860.
29192	Porter, A. W.	New Orleans, La.	Axe helves, metal cap for	July 17, 1860.
29518	Porter, A. W.	St. Johnsville, N. Y.	Post holes, machine for digging	Aug. 7, 1860.
28688	Porter, David D.	St. Johnsville, N. Y.	Propeller, marine	June 12, 1860.
27382	Porter, Huntington	United States Navy	Hoes	Mar. 6, 1860.
28194	Porter, T. W.	Cummingtown, Mass	Shoe plate	May 8, 1860.
28689	Post, Jacob	Bangor, Me.	Spring, door	June 12, 1860.
30420	Postlewait, Lemuel	Newark, N. J.	Lathes	Oct. 16, 1860.
26921	Pott, John L.	Russelsville, Ohio	Hoisting apparatus	Jan. 24, 1860.
26922	Potter, Bennett, jr.	Pottsville, Pa.	Gunpowder mills	Jan. 24, 1860.
	Potter & Co. (See Vedder, N. S., assignor.)	Hubbardston, Mass.		
	Potter & Co. (See Vedder & Murray, assignors.)			
	Potter & Co. (See Vedder & Ripley, assignors.)			

30246	Potter & Co. (See Vedder & Sanderson, assignors.)	Providence, R. I.	Finger rings, &c., manufacture of.	Oct. 2, 1860
29098	Potter, Isaac M.	South Dartmouth, Mass.	Trees from insects, apparatus for protecting.	July 10, 1860.
29815	Potter, Nathaniel, jr.	Chicago, Ill.	Car coupling.	Aug. 28, 1860.
1258	Poultney, Ransom S. (See Snelder, C. Edward, assignor.)	New York, N. Y.	Stoppers, decanter	June 19, 1860.
27830	Poultney, Thomas. (See Adams, John, assignor.)	Connaughtville, Pa.	Presses, cane.	April 10, 1860.
28501	Pountney, William.	New Brunswick, N. J.	Fire escape.	May 29, 1860.
29099	Powell, Eugene.	Middletown, Iowa.	Broom or brush.	July 10, 1860.
27154	Powers, D. J.	Madison, Wis.	Straw cutters.	Feb. 14, 1860.
30421	Pratt, Daniel R.	Worcester, Mass.	Truck for locomotives.	Oct. 16, 1860.
30547	Pratt, Daniel R.	Worcester, Mass.	Cars, railroad, bearings for.	Oct. 30, 1860.
29939	Pratt, Francis A., assignor to self and George S. Lincoln & Co.	Hartford, Conn.	Motion, devices for stopping and changing.	Sept. 4, 1860.
30757	Pratt, H. D. J.	Washington, D. C.	Propeller, marine.	Nov. 27, 1860.
30858	Pratt, Henry T., assignor to self, A. Davis, C. E. Pratt, H. C. Creshore, and C. T. Rogers.	Fitchburgh, Mass.	Chair, folding.	Dec. 4, 1860.
26708	Pratt, Ira C.	Morton, Ill.	Draining and pipe-laying machine.	Jan. 3, 1860.
30984	Pratt, Ira C., assignor to self and Thomas Parker.	Morton, Ill.	Beehives.	Dec. 18, 1860.
30499	Pratt, Miles.	Watertown, Mass.	Stoves, cooking.	Oct. 23, 1860.
28195	Pratt, William S.	Williamsburg, N. Y.	Journal boxes, anti-friction.	May 8, 1860.
29304	Pratt, William S.	Williamsburg, N. Y.	Spring, compensating lever.	July 24, 1860.
30245	Prescott, E. A.	Worcester, Mass.	Fire-arms, revolving.	Oct. 2, 1860.
30422	Pressey, John B., and Daniel Sheets.	Suisun City, Cal.	Carriage spring.	Oct. 16, 1860.
30423	Preston, A. I.	East Guilford, N. Y.	Raking and pitching bay, machines for.	Oct. 16, 1860.
27831	Preston, E. A., and D. Squier, jr. (See Squier & Preston.)	Trenton, N. J.	Desk, reading and writing.	Apr. 10, 1860.
26303	Pretsch, Curt.	Rockville, Ind.	Boilers, steam, sediment collector for.	May 15, 1860.
29100	Price, A. H., and others. (See Arnold, Price & Urner.)	Harrison, Ohio.	Planters, corn.	July 10, 1860.
27383	Price, John.	New York, N. Y.	Mop and scrubber, combination of.	Mar. 6, 1860.
28304	Price, Robert.	Industry, Ill.	Evaporating apparatus, construction of.	May 15, 1860.
28601	Price, Thomas J.	Mount Olive, N. C.	Ploughs.	June 5, 1860.
28602	Price, Whitman.	Mount Olive, N. C.	Planting cotton seed, machine for.	June 5, 1860.
28774	Price, Whitman.	New York, N. Y.	Sewing machines, binding guides for.	June 19, 1860.
29519	Price, William.	Winslow, Me.	Peg machine, shoe.	Aug. 7, 1860.
29816	Priest, Charles A.	St. Louis, Mo.	Printing presses.	Aug. 28, 1860.
29004	Priest, J. E.	East Bethany, N. Y.	Valve for steam boilers, combined pressure and vacuum.	July 3, 1860.
29913	Priest, Morgan & Whitney, jr. (See Rice, Benjamin F. assignor.)	Barnesville, Ga.	Bedstead.	Sept. 4, 1860.
29303	Priestly, Alexander. (See Martin, Richard, assignor.)	Somerhill, Pa.	Motive power, mode of obtaining.	July 24, 1860.
29442	Prindle, Daniel R.	Corning, N. Y.	Straw and stalk cutters.	July 31, 1860.
28603	Pringle, Barton S.	Waterbury, Conn.	Clock, calendar.	July 5, 1860.
30835	Pringle, Jacob.	Dayton, Ohio.	Harvesters, rakes for.	Dec. 4, 1860.
29553	Preston, Oliver W., and William W. Farnham, assignors to themselves and Payne & Orcutt.	Beverly, Mass.	Lamp lighting device.	Jan. 24, 1860.
29520	Pritchard, Eben.	Beverly, Mass.	Alarm, burglar's, combined clock and.	Aug. 7, 1860.
	Pritz, Adam.			
	Proctor, George K., assignor to self and G. H. Stickney.			
	Proctor, G. K.			
	Proctor, N. B., et al. (See Nelson & Bostwick.)			

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
27472	Protz, John.....	Easton, Pa.....	Knife and fork cleaner.....	Mar. 13, 1860.
27240	Pruyn, Augustus.....	Albany, N. Y.....	Saw blades, buck, device for allowing for construction or expansion of.....	Feb. 21, 1860.
29991	Pruyn, Augustus.....	Albany, N. Y.....	Saws, wood.....	Sept. 11, 1860.
26920	Pulsepher, Ira A. (See King, Thomas, assignor.)	Cincinnati, Ohio.....	Furnaces.....	Jan. 24, 1860.
27155	Purchase, Thomas E.....	Danville, Pa.....	Furnaces, grates for.....	Feb. 14, 1860.
28902	Purinton, A. D.....	Dover, N. H.....	Hat cushion.....	June 26, 1860.
28440	Putnam, J. G., assignor to self and J. Schieffelin, jr.....	Tioga, Pa.....	Corn shellers.....	May 22, 1860.
30183	Putnam, S. S., & Co. (See White, Lewis, assignor.)	Lyons, N. Y.....	Separating grain, &c., sleeves for.....	Sept. 25, 1860.
30985	Putney, Herbert W., assignor to self and Cyrus C. Crane.....	New York, N. Y.....	Curtain cords, brackets for.....	Dec. 18, 1860.
26709	Pye, Thomas L.....	Manchester, Tenn.....	Motion, machinery for changing.....	Jan. 3, 1860.
	Pyron, C. L., and Robert Bruce.....			
	Quann, William, and George W. Morris. (See Morris & Quann.)			
29817	Queen, Montgomery.....	Brooklyn, N. Y.....	Journal boxes.....	Aug. 28, 1860.
27067	Quetil, Julien.....	New York, N. Y.....	Moving heavy weights, apparatus for.....	Feb. 7, 1860.
28903	Quick, Thomas H.....	New York, N. Y.....	Sugar, machine for cutting.....	June 26, 1860.
30349	Quimby, David S.....	Brooklyn, N. Y.....	Fire-place heater.....	Oct. 9, 1860.
30155	Rabb, James M.....	Charleston, S. C.....	Railroad frog.....	Sept. 25, 1860.
26782	Race, Washburne.....	Seneca Falls, N. Y.....	Stove register.....	Jan. 10, 1860.
28405	Race, Washburne.....	Seneca Falls, N. Y.....	Pumps.....	May 22, 1860.
30568	Racey, William H.....	St. Augustine, Fla.....	Lamps.....	Oct. 30, 1860.
29402	Radley, James.....	New York, N. Y.....	Lamps for locomotives.....	July 31, 1860.
29005	Radspinner, Vectus, and William H. Moss.....	New Richmond, Ohio.....	Lubricating compound.....	July 3, 1860.
29403	Rainbow, J. C.....	New Briton, Pa.....	Trusses, belt.....	July 31, 1860.
27384	Rains, George W.....	Newburg, N. Y.....	Valves, slide, for steam engines.....	Mar. 6, 1860.
28011	Rains, George W.....	Newburg, N. Y.....	Boilers, steam, feed water apparatus for.....	April 24, 1860.
28502	Rains, George W.....	Newburg, N. Y.....	Engines, steam, governors for.....	May 29, 1860.
29615	Rains, George W.....	Newburg, N. Y.....	Boilers, steam.....	Aug. 14, 1860.
27566	Raith, Julius, and George P. Plant. (See Plant & Raith.)	Coventry, N. Y.....	Vehicles, trace safety bar for.....	Mar. 20, 1860.
30156	Ralph, Reuben.....	Holland Patent, N. Y.....	Cheese vats.....	Sept. 25, 1860.
29716	Ralph, William.....	Carlisle, Pa.....	Rock drills.....	Aug. 21, 1860.
	Ralston, David.....			
	Rammelsberg, Mitchell, et al. (See Stockton, V., assignor.)			
29193	Ramminger, Ignaz.....	New York, N. Y.....	Vehicles, detachable whiffletree for.....	July 17, 1860.
	Ramsay, E. A. and W. W., et al. (See May, William, assignor.)			
29101	Ramsay, George M.....	New York, N. Y.....	Sweeping streets, machine for.....	July 10, 1860.
27242	Ramsay, George W.....	New York, N. Y.....	Ploughs, steam.....	Feb. 21, 1860.
29914	Ramsay, J. W., and Daniel Wilson.....	Grafton, Va.....	India rubber bathing tubs, portable.....	Sept. 4, 1860.
29012	Ramsden, Robert.....	South Easton, Pa.....	Pumps.....	April 24, 1860.
	Ramsey, W. L., and N. A. Patterson. (See Patterson & Ramsey.)			

		Philadelphia, Pa.	Registering Indicator, station or street.		Feb. 7, 1860.
27068	Ran, Adolph H.	Philadelphia, Pa.	Registering Indicator, station or street.		Feb. 7, 1860.
	Rance, Henry, and James Gardette. (See Gardette & Rance.)				
	Rand, A. C., and Thomas S. Ray. (See Ray & Rand.)				
28775	Randall, Isaac, 2d.	Clairmont, N. H.	Drying fruit, apparatus for.		June 19, 1860.
28242	Randall, John, assignor to self and Reuben R. Smalley.	Elmira, N. Y.	Engines, steam		May 8, 1860.
30184	Randall, John, assignor to self and R. R. Smalley.	Elmira, N. Y.	Valves, slide		Sept. 25, 1860.
27308	Randall, Silas G.	Worcester, Mass.	Pumps		Feb. 28, 1860.
29194	Randall, Silas G.	New Britain, Conn.	Presses, hay		July 17, 1860.
36500	Randel, A.	New York, N. Y.	Presses		Oct. 23, 1860.
28406	Rankin, Andrew.	Philadelphia, Pa.	Lock		May 22, 1860.
28407	Rankin, Isaac N.	Middletown, Iowa.	Ploughs		May 22, 1860.
28690	Rankin, John C.	Mount Vernon, N. Y.	Liquids, apparatus for measuring.		June 12, 1860.
30836	Rankin, John H.	Versailles, Mo.	Planters, corn.		Dec. 4, 1860.
28776	Rankin, William.	Richmond, Va.	Sewing machines, cording guides for.		June 19, 1860.
29992	Rankin, William.	Richmond, Va.	Planing mouldings, machine for		Sept. 11, 1860.
	Ransom, S. H., & Co. (See Gibbs, Samuel W., assignor.)				
1214	Ransom, Samuel H.	Albany, N. Y.	Stove plates.	(Design)	Mar. 20, 1860.
1277	Ransom, Samuel H.	Albany, N. Y.	Stove, cooking.	(Design)	July 3, 1860.
1278	Ransom, Samuel H.	Albany, N. Y.	Stove, parlor.	(Design)	July 3, 1860.
1279	Ransom, Samuel H.	Albany, N. Y.	Stove, cooking.	(Design)	July 3, 1860.
29312	Ransom, S. H.	Albany, N. Y.	Stoves.		July 24, 1860.
26783	Rasquin, Henry.	New York, N. Y.	Skate fastenings		Jan. 10, 1860.
	Rathbone & Co. (See Gibbs, Samuel W., assignor.)				
29993	Raub, Joseph	Highland, Pa.	Sawing machine, hoop.		Sept. 11, 1860.
28604	Rauch, A. H.	Bethlehem, Pa.	Pumps, &c., device for drawing water from and supplying air to the air vessels of.		June 5, 1860.
30758	Ravenscraft, Harrison C.	Kingwood, Va.	Cultivators		Nov. 27, 1860.
27737	Rawson, Ruel	Quincy, Mich.	Car couplings		April 3, 1860.
29915	Ray, George G.	Boston, Mass.	Reed instrument, steam.		Sept. 4, 1860.
27069	Ray, Samuel, and M. R. Shalters.	Alliance, Ohio.	Chair and crib, combined.		Feb. 7, 1860.
27869	Ray, Samuel, and M. R. Shalters.	Alliance, Ohio.	Mowing machines		April 10, 1860.
28503	Ray, Thomas S., and A. C. Rand	Buffalo, N. Y.	Lamps, vapor		May 29, 1860.
29994	Raymond, Alfred A.	Salem, Mass.	Treadle connection for machinery		Sept. 11, 1860.
30759	Raymond, Francis	Sandusky, Ohio.	Harrows, rotary		Nov. 27, 1860.
	Read, C. D., and J. T. Whitaker. (See Whitaker & Read.)				
29521	Read, Daniel.	Hamilton, N. Y.	Mill, grinding.		Aug. 7, 1860.
	Read, George H., et al. (See Farrington, George K., ass't.)				
29818	Read, Josiah M.	Boston, Mass.	Ovens		Aug. 28, 1860.
28410	Read, Thomas N.	Aspin Wall, Va.	Presses, tobacco		May 22, 1860.
26784	Reaney, Robert L.	Philadelphia, Pa.	Gold separators		Jan. 10, 1860.
	Rickendorfer, J. (See Rosenthal, J., assignor.)				
28441	Rickhow, Isaac, assignor to John Griffith.	Brooklyn, N. Y.	Prunes, curing.		May 22, 1860.
27309	Redstone, John H. and Albert E.	Indianapolis, Ind.	Shingle machines		Feb. 28, 1860.
20247	Reece, Benjamin, et al. (See Kramer, A. J., assignor.)	Roxbury, Mass.	Watches		Oct. 2, 1860.
1343	Reed, George P.	Taunton, Mass.	Tea service	(Design)	Nov. 13, 1860.
	Reed, Henry G.				
	Reed, James W. (See Bryant, Walter, assignor.)				
28638	Reed, John C., assignor to self and S. E. Hutchinson.	Cincinnati, Ohio.	Picks		June 5, 1860.
29940	Reed, John H., assignor to self and L. J. Crans.	Penn Township, Pa.	Cleaning buckwheat, &c., machine for.		Sept. 4, 1860.
28305	Reeder, A. F.	Bloomington, Ill.	Engines, rotary		May 15, 1860.
30760	Reeder, Joseph S.	Canton, Ohio.	Fire-arms, breechloading and magazine.		Nov. 27, 1860.
26930	Reeder, Mahlon.	Philadelphia, Pa.	Liquors, malt, apparatus for preserving and discharging.		Jan. 24, 1860.
27238	Reese, Abraham	Pittsburg, Pa.	Rivet and bolt machine.		Feb. 21, 1860.

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
30697	Reese, Adam R.	Phillipsburg, N. J.	Fodder cutters	Nov. 20, 1860.
27832	Reese, Lewis C.	Phillipsburg, N. J.	Harvesters	April 10, 1860.
30091	Reeve, Augustus	Allowaystown, N. J.	Bolt, shutter	Sept. 18, 1860.
28904	Reeves, J. J.	Sulphur Springs, Texas	Medical compound	June 26, 1860.
30350	Rehn, C. L., assignor to Lucas & Company	Philadelphia, Pa.	Kegs, metallic, fastening for	Oct. 9, 1860.
27070	Reichard, August	Washington, Mo.	Pumps	Feb. 7, 1860.
29819	Reid, Ezra	Bazetta, Ohio	Paddle wheel fastening	Aug. 28, 1860.
27310	Reid, Lawrence, and John Rogers	New York, N. Y.	Glue, manufacture of	Feb. 28, 1860.
30424	Reid, William W.	Rochester, N. Y.	Churn	Oct. 16, 1860.
29718	Reighard, Jacob H., and C. L. Knecht	Birmingham, Pa.	Gas vessels, attachment for hinged covers for	Aug. 21, 1860.
29404	Renard, Joseph	Lyons, France	Colors, analine, preparation of	July 31, 1860.
27928	Renshaw, D., and C. J. Rooney. (See Rooney & Renshaw.)	Jersey City, N. J.	Horse powers	April 17, 1860.
1244	Requa, E. B.	Cincinnati, Ohio	Stoves	May 15, 1860.
29916	Resor, Jacob	Boston, Mass.	Ships, &c., sheathing	Sept. 4, 1860.
30545	Revere, John	Indianapolis, Ind.	Metal, sheet, manufacture of square pans of	Oct. 30, 1860.
27921	Roxford, Eugene M.	North Bridgewater, Mass.	Staging supporter for mechanics' use	April 17, 1860.
29747	Reynolds, Azel, jr.	West Farms, N. Y.	Telegraphic instruments	Aug. 21, 1860.
28131	Reynolds, Edwin F., assignor to self and G. E. Sherwood	New York, N. Y.	Bonnet frames, clamp for	May 1, 1860.
30986	Reynolds, H. A., assignor to R. T. Wilde	New York, N. Y.	Ploughs, steam	Dec. 18, 1860.
27156	Reynolds, John	Providence, R. I.	Propulsion, marine	Feb. 14, 1860.
27156	Reynolds, Joseph	Manchester, N. H.	Window screens	Mar. 13, 1860.
27473	Reynolds, Lewis L.			
27473	Reynolds, Marcus V., et al. (See Bacon, William A., assignor.)			
29820	Rhodes, Horatio N.	Richmond, Vt.	Railroads, sliding switch for	Aug. 28, 1860.
29621	Rhodes, Horatio N.	Richmond, Vt.	Railroad switch, safety	Aug. 28, 1860.
28408	Rhodes, M. G., and J. M. Skaggs	Talladega, Ala.	Ploughs	May 22, 1860.
29129	Rible, John H., assignor to Jacob W. Bope	Somerset, Ohio	Harvesting machines	July 10, 1860.
29195	Ricards, George, et al. (See Miller, Charles, assignor.)			
29195	Rice, Charles L.	Milwaukee, Wis.	Locomotive engines, pumps for	July 17, 1860.
29006	Rice, Clark. (See Scofield & Rice.)	Providence, R. I.	Dough, rollers for pressing	July 3, 1860.
29616	Rice, Fitzjames, and George W. Hayward	Frederick City, Md.	Mill, sugar, grinding	Aug. 14, 1860.
27738	Rice, Grafton I.	Concord, N. H.	Axle boxes, railroad	April 3, 1860.
29551	Rice, Harvey	Concord, N. H.	Cars, railroad, journal boxes for	Aug. 7, 1860.
29551	Rice, Harvey, assignor to James H. Derming and S. H. Jenkins.			
29822	Rice, L. P.	Adrian, Mich.	Valves for steam engines, slide	Aug. 28, 1860.
26925	Rice, William	Philadelphia, Pa.	Curtain fixture	Jan. 24, 1860.
26927	Rice, William	Philadelphia, Pa.	Steam generator	Jan. 24, 1860.
29995	Rice, William	Philadelphia, Pa.	Bomb shells	Sept. 11, 1860.
27090	Richard, Albert C.	Newtown, Conn.	Wrench	Feb. 7, 1860.
29717	Richard, Albert C.	New York, N. Y.	Rubber, waste, devulcanizing	Aug. 21, 1860.
29717	Richard, A. C., and Oscar Falke. (See Falke & Richard.)			
28241	Richards, C. B., assignor to Samuel J. Seeley	Brooklyn, N. Y.	Catch for doors, hook	May 8, 1860.

30185	Richards, H. E., and L. S. Goble. (See Williamson, Geo., assignor.)	Lafayette, Ind.	Corn shellers and cleaners.	Sept. 25, 1860.
26863	Richards, J. C., assignor to self, J. Hubbler, and R. M. McGrath.	Milwaukee, Wis.	Blowers	Jan. 17, 1860.
27367	Richards, T. C.	Barcelona, Spain	Gas meters, wet.	Mar. 20, 1860.
28196	Richards, Walter D. (See Griffin, Caleb H., assignor.)	Boston, Mass.	Syringes, enema.	May 8, 1860.
28504	Richardson, Francis B. and Byron L.	New York, N. Y.	Warming buildings, steam heating apparatus for.	May 29, 1860.
26928	Richardson, George W.	Barre, Vt.	Water wheels.	Jan. 24, 1860.
27311	Richardson, H. H.	New York, N. Y.	Pen and pencil case.	Feb. 28, 1860.
30761	Richardson, John	South Braintree, Mass.	Leather, machine for cutting.	Nov. 27, 1860.
28442	Richardson, John W.	Philadelphia, Pa.	Washing machine.	May 22, 1860.
	Richardson, Mark, assignor to self, Thomas Cort, and H. Rowbotham.			
	Richardson, N. P., & Company. (See Stevens, William W., assignor.)			
29617	Richardson, O. L.	Athens, Ga.	Millstones, curb for.	Aug. 14, 1860.
30248	Richardson, Theodore M.	Stockton, Maine.	Plane bits, device for securing.	Oct. 2, 1860.
	Richardson, William and John. (See Frewasser, George E., assignor.)			
28605	Richter, C. F.	Columbia, S. C.	Ploughs	June 5, 1860.
28691	Richter, Charles W.	Madison, Ga.	Lamps, vapor	June 12, 1860.
27071	Ridley, Henry A.	Somerville, Tenn.	Trap, rat	Feb. 7, 1860.
29196	{ Rigell, Mark, and W. D. Ivey.	{ Dawson, Ga. Millford, Ga.	Cultivators, cotton.	July 17, 1860.
29618	Rigell, Mark.	Dawson, Ga.	Cultivator	Aug. 14, 1860.
28606	Righter, George W.	Philadelphia, Pa.	Bottle boxes, porter.	June 5, 1860.
27474	Riker, William	Newark, N. J.	Jewelry, process of embossing designs on metals for.	Mar. 13, 1860.
29613	Riley, William, jr.	Reading, Pa.	Nail plate feeder.	Aug. 14, 1860.
	Rinehart, Norman & Burnham. (See Burnham G., assignor.)			
27157	Ring, Aaron.	Westbrook, Maine.	Seeding machines.	Feb. 14, 1860.
29311	Ring, Samuel.	Cleveland, Ohio	Straw cutters.	July 24, 1860.
29620	Ripley, Ezra.	Troy, N. Y.	Wrench and pincers	Aug. 14, 1860.
30987	Ripley, Ezra, and N. S. Vedder. (See Vedder & Ripley.)	Troy, N. Y.	Wrench.	Dec. 18, 1860.
29007	Ritchie, Edward S.	Brookline, Mass.	Cars, city railroad, mechanism for stopping and starting.	July 3, 1860.
26926	Ritter, Andrew J.	Rahway, N. J.	Vehicles, attaching thills to	Jan. 24, 1860.
29102	Ritson, Edwin.	Sanbornton Bridge, N. H.	Seeding machines.	July 10, 1860.
30762	Rivers, A. W. Leland.	Midway, S. C.	Ploughs	Nov. 27, 1860.
28905	Rix, John, and John S. Shaw	Springfield, Mo.	Engines, rotary	June 26, 1860.
29313	Roberts, J. M.	Plaisance, La.	Vehicles, mode of detaching horses from.	July 24, 1860.
	Roberts, A. and P. (See Murphy, John W., assignor.)			
28409	Roberts, Carter & Wall. (See Wall, Roberts & Carter.)	Winchester, Ill.	Washing machines.	May 22, 1860.
	Roberts, Clark.			
29103	Roberts, G., et al. (See Wall, Roberts & Carter.)	Worcester, Mass.	Lathe.	July 10, 1860.
30425	Roberts, Milton.	Cleveland, Ohio.	Barrels, method of making.	Oct. 16, 1860.
	Roberts, Sheridan.			
	Roberts, Wood & Hubbell. (See Hubbell, Wood & Roberts.)			
28197	Robertson, Elijah.	Hartford, Conn.	Potato digger	May 8, 1860.
28785	Robertson, George W.	Philadelphia, Pa.	Hydrants, waste cocks of	Jan. 10, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
26931	Robertson, George W.	Philadelphia, Pa.	Hydrants	Jan. 24, 1860.
29008	Robertson, Henry H.	Kingston, Mo.	Trap, fly	July 3, 1860.
29104	Robertson, Henry H.	Kingston, Mo.	Ploughs	July 10, 1860.
30589	Robertson, Henry H., and Cyrus G. Carr.	Kingston, Mo.	Cultivators	Nov. 6, 1860.
30249	Robertson, R. I., et al. (See Ballard, Allen S., assignor.)	Cambridgeport, Mass.	Clothes dryer	Oct. 2, 1860.
27259	Robinson, Charles.	Waukesha, Wis.	Tanning	Feb. 21, 1860.
26786	Robinson, David, jr., et al. (See Plumer, John C., ass'r.)	Richmond, Ind.	Horse powers	Jan. 10, 1860.
30932	Robinson, F. W.	Richmond, Ind.	Separators, grain	Dec. 18, 1860.
27929	Robinson, F. W.	Sharptown, Md.	Planters, seed	April 17, 1860.
29621	Robinson, John, of Ell.	Bell Air, Ohio.	Engines, steam, pistons for	Aug. 14, 1860.
30351	Robinson, John K., and John M. Clark.	Bell Air, Ohio.	Engines, steam, pistons for	Oct. 9, 1860.
30837	Robinson, J. K., and J. M. Clark.	Biddeford, Me.	Ploughs	Dec. 4, 1860.
29996	Robinson, John G.	Augusta, Ga.	Staves, machine for jointing	Sept. 11, 1860.
29997	Robinson, L. (See Gray, William H., assignor.)	Augusta, Ga.	Staves, machine for riving and dressing	Sept. 11, 1860.
27158	Robinson, William.	Newark, N. J.	Gag runner	Feb. 14, 1860.
26924	Robotham, William.	Rochester, N. Y.	Bedstead fastening	Jan. 24, 1860.
29719	Rockwell, S. D., et al. (See Hebard, G. F., Hill & Rockwell.)	Talladega, Ala.	Presses	Aug. 21, 1860.
29823	Roda, Adolph	Talladega, Ala.	Ploughs	Aug. 28, 1860.
29998	Roden, A.	Talladega, Ala.	Mills, fanning	Sept. 11, 1860.
29824	Roe, Bernard F.	Nebraska City, Nebr.	Hoops, cheese	Aug. 28, 1860.
29825	Roe, Henry A.	Madison, Ohio	Girders, trussed compound	Aug. 28, 1860.
30426	Roebing, John A.	Trenton, N. J.	Cars, railroad, metallic	Oct. 16, 1860.
28777	Roebing, John A.	Trenton, N. J.	Planters, seed	June 19, 1860.
27568	Rogers, Alonzo J.	Stephentown, N. Y.	Wood, machine for bending	Mar. 20, 1860.
26787	Rogers, Artemus.	Painesville, Ohio	Mouldings, machine for cutting	Jan. 10, 1860.
28198	Rogers & Brother, and Hartford Manufacturing Company. (See White, Albert M., assignor.)	Norwich, Conn.	Cultivator teeth	May 8, 1860.
30352	Rogers, C. B.	Pittsburg, Pa.	Ploughs, securing points to	Oct. 9, 1860.
29314	Rogers, C. T., et al. (See Pratt, H. F., assignor.)	Grafton, Ohio	Candlesticks	July 24, 1860.
29746	Rogers, David B.	South Manchester, Conn.	Ores, deoxydising	Aug. 21, 1860.
29405	Rogers, Henry D.	North Haverstraw, N. Y.	Pipe, stove, machine for forming	July 31, 1860.
29622	Rogers, Henry E.	Santa Clara County, Cal.	Handles, tools	Aug. 14, 1860.
27385	Rogers, Isaac, assignor to Samuel Daskam.	San Francisco, Cal.	Seeding machines	Mar. 6, 1860.
30427	Rogers, Jacob S. (See Bradley, George, assignor.)	Sacramento, Wis.	Boots, tools for trimming	Oct. 16, 1860.
	Rogers, James.	Danvers, Mass.		
	Rogers, John, and L. Reid. (See Reid & Rogers.)			
	Rogers, John G.			
	Rogers, John R.			
	Rogers, L. C.			

30763	Rogers, Noah.....	Thomas County, Ga.....	Cultivators, cotton.....	Nov. 27, 1860.
27930	Rogers, Robert E.....	Philadelphia, Pa.....	Steam generators.....	April 17, 1860.
	Rogers & Shuler. (See Shuler & Rogers.)			
	Rogers, Smith & Co. (See Godfrey, Edward A., ass't.)			
27072	Rolland, Auguste.....	Toulouse, France.....	Fertilizers.....	Feb. 7, 1860.
30838	Rollin, Daniel G.....	New York, N. Y.....	Skirts, spiral hoop.....	Dec. 4, 1860.
28813	Rollings, Alpheus D., assignor to self and H. J. Howland..	Green Point, N. Y.....	Steering apparatus.....	June 19, 1860.
29197	Rollins, George A.....	Nashua, N. H.....	Crushing stone, machine for.....	July 17, 1860.
28306	Rollins, J. H.....	Wapello, Iowa.....	Lamps, vapor.....	May 15, 1860.
30590	Rolls, Joseph.....	New York, N. Y.....	Carpet duster.....	Nov. 6, 1860.
29999	Roney, Benjamin T.....	Philadelphia, Pa.....	Harvester cutters.....	Sept. 11, 1860.
27739	Rooke, J. B., and W. G. Maupin. (See Maupin & Rooke.)	New York, N. Y.....	Pen stand.....	April 3, 1860.
29406	Rooney, Cornelius J., and David Renshaw.....	New York, N. Y.....	Padlock.....	July 31, 1860.
27312	Roos, Frederick, and F. Spoehr.....	Canton, Mo.....	Seeding machines.....	Feb. 28, 1860.
27740	Root, Alonzo R.....	Canton, Mo.....	Seeding machines.....	April 3, 1860.
	Root, Alonzo R.....			
	Root, F. B., and S. S. Jewett. (See Stanard, W. W., assignor.)			
	Root, F. H., and S. S. Jewett. (See Vedder, N. S., ass't.)			
	Root, F. H., and S. S. Jewett. (See Stanard, W. W., assignor.)			
27931	Root, Henry S., and Thomas Lloyd.....	Muncey, Pa.....	Straw cutters.....	April 17, 1860.
28411	Root, Marshall S.....	Medina, Ohio.....	Harrows, seeding.....	May 22, 1860.
27239	Roots, P. H.....	Connersville, Ind.....	Water wheels.....	Feb. 21, 1860.
30157	Roots, P. H.....	Connersville, Ind.....	Blowers.....	Sept. 25, 1860.
	Rosebrock, William, and Charles Kinsler. (See Kinsler & Rosebrock.)			
29009	Rose, Charles.....	Allentown, Pa.....	Saws, scroll, device for straining.....	July 3, 1860.
30839	Rose, C. A.....	Columbia, Ala.....	Planters, cotton seed.....	Dec. 4, 1860.
28814	Rose, Israel M., assignor to John R. Morrell.....	New York, N. Y.....	Sewing machines.....	June 19, 1860.
30635	Rosenberg, Meier, and Henry Scheuerle.....	New York, N. Y.....	Bed bottom, spring.....	Nov. 13, 1860.
27475	Rosencrantz, E. D.....	New York, N. Y.....	Telegraph wires..... (Design)	Mar. 13, 1860.
1230	Rosenthal, Joseph, assignor to J. Rickendorfer.....	New York, N. Y.....	Pencils, stamping on lead..... (Design)	April 3, 1860.
1229	Rosenthal, Joseph, assignor to J. Rickendorfer.....	New York, N. Y.....	Trade mark for lead pencils.....	April 3, 1860.
30092	Rosner, George.....	Rochester, N. Y.....	Locks.....	Sept. 18, 1860.
	Ross, C., and H. A. Nevers. (See Nevers & Ross.)			
27741	Ross, James K.....	Lebanon, Ohio.....	Fire-places.....	April 3, 1860.
30591	Ross, John G.....	New York, N. Y.....	Wheels, tide, arrangement of gates for directing the flow of water upon.....	Nov. 6, 1860.
28607	Ross, Nathan D.....	Braintrim, Pa.....	Churn.....	June 5, 1860.
27673	Ross, Robert, assignor to self and George J. Stannard.....	St. Albans, Vt.....	Water wheel, horizontal.....	Mar. 27, 1860.
30645	Roudebush, George S.....	Natchez, Miss.....	Cotton and corn stalk cutters.....	Nov. 13, 1860.
27476	Roulstone, E. A. G.....	Roxbury, Mass.....	Trunks.....	Mar. 13, 1860.
	Rounds, E., and C. L. Ingraham. (See Ingraham & Rounds.)			
27073	Rounds, W. H.....	Campello, Mass.....	Leather, machine for trimming, chamfering, and skiving.....	Feb. 7, 1860.
26929	Roux, John.....	New York, N. Y.....	Oils, sticative, manufacture of.....	Jan. 24, 1860.
	Rowbotham, H., et al. (See Richardson, Mark, assignor.)			
30840	Rowe, Anson.....	Atalissa, Iowa.....	Grain riddles.....	Dec. 4, 1860.
29040	Rowe, Eli W., assignor to self and J. T. Hardy.....	Brewer, Me.....	Tile, drain.....	July 3, 1860.
27260	Rowe, James, assignor to self and Martin B. Ewing.....	Cincinnati, Ohio.....	Sewing machines.....	Feb. 21, 1860.
27335	Rowe, John L., assignor to self and R. F. Clow.....	New York, N. Y.....	Club, police.....	Feb. 28, 1860.
29552	Rowell, John B., assignor to Jonathan Bufum.....	Lynn, Mass.....	Composition for covering blackboards.....	Aug. 7, 1860.

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
28608	Rowland, O. P. Roxbury Carpet Company. (See McNair, David, ass'r.) Roxbury Carpet Company. (See Pierce, Francis J., ass'r.)	Jamesport, N. Y.	Boom-jaws, elastic lining for.	June 5, 1860.
30933	Royce, John S.	Cuylersville, N. Y.	Harvesting machines.	Dec. 18, 1860.
30354	Rudasill, Michael E.	Shelby, N. C.	Pumps.	Oct. 9, 1860.
30501	Rudasill, Michael E.	Shelby, N. C.	Stalks, &c., machines for cutting.	Oct. 23, 1860.
30692	Rudasill, Michael E.	Shelby, N. C.	Hatchets.	Nov. 20, 1860.
28538	Ruddick, Hamilton, assignor to self and Jonathan Pierce.	Boston, Mass.	Sewing machines.	May 29, 1860.
30353	Ruegg, John.	St. Louis, Mo.	Brush machines.	Oct. 9, 1860.
30693	Ruegg, John.	St. Louis, Mo.	Brushmaking machine.	Nov. 20, 1860.
27074	Ruff, Charles A.	Boston, Mass.	Skates.	Feb. 7, 1860.
27386	Ruff, Samuel P.	Weaver's Old Stand, Pa.	Mill spindles.	Mar. 6, 1860.
28013	Rugg, George.	Potsdam, N. Y.	Bullet ladle.	April 24, 1860.
30646	Rugg, George.	Potsdam, N. Y.	Turning machines.	Nov. 13, 1860.
27387	Ruggles, D. C., and G. C. Bovey. (See Bovey, G. C.)	New York, N. Y.	Engines, steam, oscillating.	Mar. 6, 1860.
29010	Runkel, Mark.	Lancaster, Pa.	Mills, grinding.	July 3, 1860.
28778	Ruof, John, Anthony Heupel, and Frank Leuthy.	McVeytown, Pa.	Seeding machines.	June 19, 1860.
27569	Rupp, Mahlon B.	New York, N. Y.	Motive powers, adaptation of substances as	Mar. 20, 1860.
29407	Ruschhaupt, Frederick M.	New York, N. Y.	Vinegar, apparatus for manufacture of.	July 31, 1860.
28330	Ruschhaupt, F. M.	Coatesville, Pa.	Planters, seed.	May 15, 1860.
29310	Russell, Ephraim, assignor to self and James S. Wiley	Manlius, N. Y.	Pawl and ratchet.	July 24, 1860.
27159	Russell, E. P.	Manchester, N. H.	Mowing machine cutters.	Feb. 14, 1860.
26864	Russell, Fisk.	Grampion Hills, Pa.	Harrows.	Jan. 17, 1860.
30988	Russell, John.	Grampion Hills, Pa.	Stove covers.	Dec. 18, 1860.
29408	Russell Manufacturing Company. (See Cooke, James C., assignor.)	Ottawa, Ill.	Engines, rotary.	July 31, 1860.
29623	Russell, Samuel T.	Stoughton, Mass.	Wrench and vise.	Aug. 14, 1860.
27075	Russell, Spencer, et al. (See Gale, Charles A., assignor.)	Indianapolis, Ind.	Shingle machines.	Feb. 7, 1860.
27076	Ruthenbury, Solomon.	Derby Line, Vt.	Photographs, solution for toning.	Feb. 7, 1860.
27077	Rutherford, James M., et al. (See Hancock, George.)	Pontiac, Mich.	Corn shellers.	Feb. 7, 1860.
30989	Ryan, Abraham H., et al. (See Patee, Lester, assignor.)	Clinton, La.	Cotton cleaners.	Dec. 18, 1860.
27833	Ryckman, S. W.	New York, N. Y.	Varnish.	April 10, 1860.
28779	Sabatier, Joseph, William Carpenter, and H. R. Jolley.	New York, N. Y.	Polish for furniture.	June 19, 1860.
29317	Sabatier, Andre.	Egremont, Mass.	Thills to axles, coupling for.	July 24, 1860.
1337	Sadler, James.	Philadelphia, Pa.	Stoves. ....(Design)....	Oct. 9, 1860.
27008	Sage, D. C. (See Cooke, James C., assignor.) Sailor, Samuel H., and Jacob Steffe, assignors to North, Chase & North. Sailor, Samuel H., and Jacob Steffe. (See Steffe & Sailor.) Saloshinsky, Herman. Sampson, Alden. (See Myer, Charles T., assignor.)	Boston, Mass.	Boot heels, machine for attaching and finishing.	Jan. 31, 1860.

28609	Sampson, Jeremiah. (See Meger, Jeremiah, assignor.)	New York, N. Y.	Car couplings	June 5, 1860.
1295	Sammons, J. S.	New York, N. Y.	Range, cooking.	July 31, 1860.
28307	{ Sanders, A. K., and N. S. Vedder, assignors to A. K. Sanders. Sanderson, W. I., and Sidney Stanton. Sanderson, William L., and N. S. Vedder. (See Vedder & Sanderson.)	Troy, N. Y.	Boiler-feeders, steam	May 15, 1860.
30694	Sands, William A.	Brooklyn, N. Y.	Ships' sails	Nov. 20, 1860.
30250	Sanford, George	Providence, R. I.	Bracelets, manufacture of	Oct. 2, 1860.
28412	Sanford, Samuel T.	Fall River, Mass.	Vegetable slicer	May 22, 1860.
27742	Sanford, Solomon N.	Cleveland, Ohio.	Cars, city railroad, apparatus for starting	April 3, 1860.
27570	Sanford, Warren, Harrover & Hill. (See Hebard, Hill & Rockwell, assignors.)			
27009	Sanford, W. A. (See Hewett, Henry, assignor.)			
30888	Sangster, James	Buffalo, N. Y.	Churn	Mar. 20, 1860.
1345	Sanson, I. S.	Philadelphia, Pa.	Railroad switches	Jan. 31, 1860.
29720	Sargent, George D.	Boston, Mass.	Bedstead, folding	Dec. 11, 1860.
29321	Sargent, I. B., and P. Bradford, assignors to I. Sargent	New Britain, Conn.	Drawer pull	Nov. 13, 1860.
	Sargent, Joseph B.	New Britain, Conn.	Nail head, picture	Aug. 21, 1860.
	Sargent, Sumner	Watertown, Mass.	Lamps	July 24, 1860.
28199	Sartwell, Daniel C., and G. W. Tolhurst. (See Tolhurst & Sartwell.)			
27160	Satterwhite & Moore. (See Moore & Satterwhite.)			
27313	Sauley, Octave	New Orleans, La.	Lamps	May 8, 1860.
29322	Sault, Thomas	Seymour, Conn.	Caoutchouc and allied gums, rollers for working	Feb. 14, 1860.
27651	Sault, Thomas	Seymour, Conn.	Engines, steam, air trap for	Feb. 28, 1860.
28305	Saunders, Isaac C.	Trenton, Mich.	Boilers, steam, method of applying fusible metallic plugs to	July 24, 1860.
	Saunders, William R.	Buena Vista, Miss.	Ploughs	Mar. 27, 1860.
	Savage, Daniel F.	Boston, Mass.	Dumb bells	May 29, 1860.
28331	{ Savage, Edward, and Henry Savage North, assignors to Savage Revolving Fire-arm Company. Savage Revolving Fire-arm Company. (See next above.)	Cromwell, Conn.	Fire-arms, revolving	May 15, 1860.
30158	Savage, W. G.	Middletown, Conn.		
28200	Savery & Co. (See Lillagore, T., assignor.)	Clinton, Ill.	Planters, corn	Sept. 25, 1860.
28780	Sawyer, Addison M.	Athol, Mass.	Steam power to propellers, applying	May 8, 1860.
30428	Sayre, Charles H.	Utica, N. Y.	Cultivator teeth	June 19, 1860.
28014	Sayre, Charles H.	Utica, N. Y.	Shovels, straps for handles of	Oct. 16, 1860.
28506	Scaife, William B.	Pittsburg, Pa.	Cask, metallic	April 24, 1860.
30251	Scarlett, William	Aurora, Ill.	Skates	May 29, 1860.
27834	Schaeffer, Jacob	Aurora, Ill.	Biers	Oct. 2, 1860.
29323	Schatt, John	Henderson, Ky.	Separators, grain	April 10, 1860.
26788	Schaubel, William	Philadelphia, Pa.	Gas meters	July 24, 1860.
26961	Schell, Henry S.	Philadelphia, Pa.	Boilers, steam	Jan. 10, 1860.
	Scheller, Augustus, and F. F. Mayer. (See Mayer, Ferdinand & F., assignor.)	Philadelphia, Pa.	Creepers to prevent slipping on ice	Jan. 24, 1860.
29721	Schenkl, John P.	Boston, Mass.	Umbrellas	Aug. 21, 1860
27389	Schettler, F. R., et al. (See Morris, Thomas A.)			
30889	Scheuerle, H., and M. Rosenberg. (See Rosenberg & Scheurle.)			
	Scheutz, John Adam	St. Louis, Mo.	Liniments, anti-rheumatic	Mar. 6, 1860.
	Schevenell, Oswald	Marion, Ala.	Tenoning tool	Dec. 11, 1860.

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
30695	Schlefflein, J., jr., et al. (See Putnam, J. G., assignor.)	Tioga, Pa.	Straw cutters.....	Nov. 20, 1860.
29324	Schlefflein, Jacob, jr.	Savannah, Ga.	Lamps.....	July 24, 1860.
29941	Schley, John	New York, N. Y.	Gas from wood, mode of making.....	Sept. 4, 1860.
30159	Schmidt, August, assignor to self and Charles Edward and Herman Schmidt.	New York, N. Y.	Mop wringer.....	Sept. 25, 1860.
29105	Schmidt, Christian S.	Hackensack, N. J.	Rakes, horse.....	July 10, 1860.
29917	Schnebley, William and Thomas	Williamsport, Pa.	Bridge, draw, self acting.....	Sept. 4, 1860.
29522	Schneider, Louis, and J. A. Montgomery	New York, N. Y.	Piano forte keys.....	Aug. 7, 1860.
27477	Schoenemann, C. J.			
27571	Schoener, William L., & Co. (See Chapin, Henry A., assignor.)			
30841	Schofield, Silas C.	Freeport, Ill.	Harrows.....	Mar. 13, 1860.
29624	Schofield, Thomas	Grass Valley, Cal.	Bridges, floating.....	Mar. 20, 1860.
27652	Schone, Robert	New York, N. Y.	Time register.....	Dec. 4, 1860.
26711	Schroeder, William F.	Laporte, Ind.	Planters, seed.....	Aug. 14, 1860.
28508	Schuffenecker, J. F.	Keokuk, Iowa	Brick moulds.....	Mar. 27, 1860.
28639	Schutte, Frederick	Philadelphia, Pa.	Vegetable cutter.....	Jan. 3, 1860.
30355	Schuyler, John F., assignor to William E. Lockwood.	Philadelphia, Pa.	Saw teeth, machine for cutting.....	May 29, 1860.
29011	Schveder, C. J.	Astoria, N. Y.	Grindstones, apparatus for dressing.....	June 5, 1860.
29106	Schwalm, Francis	Joliet, Ill.	Propeller.....	Oct. 9, 1860.
29318	Schwalm, Francis	Joliet, Ill.	Drilling machines, rock.....	July 3, 1860.
28610	Schwaninger, Alexander	Milwaukee, Wis.	Stone dressing machines.....	July 10, 1860.
30093	{ Scofield, Charles, and	Adams, N. Y.	Gas, apparatus for generating.....	July 24, 1860.
30252	{ Clarke Rice.....	Watertown, N. Y.	Sewing machines.....	June 5, 1860.
26934	Seollay, George W.	St. Louis, Mo.	Glass moulds.....	Sept. 18, 1860.
28611	Seollay, George W.	St. Louis, Mo.	Coffins, glass.....	Oct. 2, 1860.
30764	Scott, Francis B.	Buffalo, N. Y.	Ditching machine.....	Jan. 24, 1860.
30356	Scott, Gaar & Gaar. (See Gaar, Abraham, assignor.)			
30160	Scott, George	Cincinnati, Ohio.	Jars, moulds for.....	June 5, 1860.
27599	Scott, George	Steubenville, Ohio.	Dough, machine for raising and kneading.....	Nov. 27, 1860.
28507	Scott, Robert, jr.	Madison, Ind.	Press, cotton.....	Oct. 9, 1860.
30161	Scott, William J.	Albany, N. Y.	Pockets, &c., burglar-proof lock for.....	Sept. 25, 1860.
27010	Scoville, Hiram H., and D. R. Fraser, assignors to themselves and P. W. Gates.	Chicago, Ill.	Quartz crushers.....	Mar. 24, 1860.
26710	Scoville, J.	Syracuse, N. Y.	Ploughs, mould boards for, machine for making.....	May 29, 1860.
27236	Scoville, Thaddeus S.	Chicago, Ill.	Hemp brakes.....	Sept. 25, 1860.
27368	Scoville, Thaddeus S.	Buffalo, N. Y.	Harvesters.....	Jan. 31, 1860.
30162	Scoville, Thaddeus S.	New York, N. Y.	Clothes frame.....	Jan. 3, 1860.
28308	Scoville, Thaddeus S.	New York, N. Y.	Mosquito bar.....	Feb. 21, 1860.
29722	Scoville, William H. and Ives	New York, N. Y.	Cultivators.....	Mar. 6, 1860.
	Scranton & Slade. (See Slade & Scranton.)	Chicago, Ill.	Quartz pulverizer and amalgamator.....	Sept. 25, 1860.
	Scribner, John M.	Middleburgh, N. Y.	Lathes.....	May 15, 1860.
	Scrimshaw, George	Milburg, Pa.	Composition for pavements, &c.....	Aug. 21, 1860.

29826	Scripture, Eliphalet S.....	New York, N. Y.....	Wrenches.....	Aug. 26, 1860.
30253	Scroggins, J. M., and B. Davis. (See Davis & Scroggins.) Scudder, John P.....	Hightstown, N. J.....	Potato diggers.....	Oct. 2, 1860.
27572	Seabury, Thomas S. (See West, Frank H.) Sealey, G. H., and James Lee.....	New York, N. Y.....	Stereoscopic pictures, cases for exhibiting.....	Mar. 20, 1860.
28106	Seaman, Amos.....	Winnebago County, Ill.....	Planters, corn.....	May 1, 1860.
30705	Seamans, Arba, assignor to Marion Seamans.....	Bowmansville, N. Y.....	Washing machines.....	Nov. 20, 1860.
28592	Searle, Thos. A., and J. W. Hoard. (See Hoard & Searle.) Seavey, Eben.....	Boston, Mass.....	Fire brick.....	June 12, 1860.
30890	Secor, J. V. H.....	New York, N. Y.....	Seeding machines.....	Dec. 11, 1860.
28041	Seely, Charles A. (See Fry & Seely.) Seely, Samuel J., assignor to Charles W. Durant.....	Buffalo, N. Y.....	Cars, railroad.....	April 24, 1860.
28201	Seely, Samuel J.....	Albany, N. Y.....	Canal locks, gates for.....	May 8, 1860.
29625	Seiberling, John.....	Philadelphia, Pa.....	Alkalies, caustic, preservation of.....	Aug. 14, 1860.
29012	Seidle, Frederick, and Samuel Eberly.....	Mechanicsburg, Pa.....	Rakes, horse.....	July 3, 1860.
29107	Seidle, Frederick, and Samuel Eberly.....	Mechanicsburg, Pa.....	Bending wood, machine for.....	July 10, 1860.
27390	Selby, James.....	Peoria, Ill.....	Drills, seed.....	Mar. 6, 1860.
30934	Selden, George M.....	Troy, N. Y.....	Troughs, eave.....	Dec. 18, 1860.
27835	Selden, L. K.....	Haddam, Conn.....	Cradle, child's.....	April 10, 1860.
28015	Selden, L. K.....	Haddam, Conn.....	Swing, portable.....	April 24, 1860.
29918	Selfridge, George C.....	North Greenfield, N. Y.....	Pumps.....	Sept. 4, 1860.
28107	Selleck, Thaddeus.....	Greenwich, Conn.....	Metal, pig, Franklinite, method of employing, for making, grinding, and abrading surfaces.....	May 1, 1860.
29827	Sellers, J. C.....	Woodville, Wis.....	Presses, cotton.....	Aug. 28, 1860.
30163	Sellers, J. C.....	Woodville, Wis.....	Cultivators, cotton.....	Sept. 25, 1860.
28413	Sellers, Theodore.....	East Birmingham, Pa.....	Cans, preserve.....	May 22, 1860.
27478	Sellers, William.....	Philadelphia, Pa.....	Lathes, turning.....	Mar. 13, 1860.
28906	Seltman, Charles.....	Washington, D. C.....	Shutter operator.....	June 26, 1860.
27241	Semmeldinger, August.....	New York, N. Y.....	Photographic cameras.....	Feb. 21, 1860.
29523	Semmeldinger, August.....	New York, N. Y.....	Photographic cameras.....	Aug. 7, 1860.
27573	Sener, J. W., and Wm. G. Pollock. (See Pollock & Sener.) Sewell, William.....	New York, N. Y.....	Engines, steam, surface condensers for.....	Mar. 20, 1860.
29524	Sewerkrop, C.....	Louisville, Ky.....	Cutting boxes.....	Aug. 7, 1860.
28202	Sexton, Bezaleel.....	East Windsor, Conn.....	Drying cloth, machinery for.....	May 8, 1860.
30254	Sexton, S. B.....	Baltimore, Md.....	Stoves and ranges, cooking.....	Oct. 2, 1860.
29198	Seymour, Edward L.....	New York, N. Y.....	Ore separator.....	July 17, 1860.
28095	Seymour, Frederick.....	Cincinnati, Ohio.....	Fire escape.....	May 1, 1860.
27336	Seymour, Henry A., ass'r to F. E. Darrow and Wm. Webster. Seymour, Morgan, Williams & Palmer. (See St. John, J. A., assignor.)	Bristol, Conn.....	Thermostat.....	Feb. 28, 1860.
30000	Seymour, William H. and Lathrop.....	Weymouth, Ohio.....	Cultivators.....	Sept. 11, 1860.
28203	Shadbolt, Samuel.....	Scottsville, N. Y.....	Stoves.....	May 8, 1860.
30255	Shaffer, Hiram M.....	Bucyrus, Ohio.....	Bee hives.....	Oct. 2, 1860.
29409	Shafer, John B.....	Grafton, Va.....	Car, railroad cattle.....	July 31, 1860.
29013	Shafer, John G.....	Fulton County, Pa.....	Mill bushes.....	July 3, 1860.
30001	Shafer, William.....	Rippon, Wis.....	Washing machine.....	Sept. 11, 1860.
28509	Shaler, Reuben.....	Madison, Conn.....	Skates, wheel.....	May 29, 1860.
29443	{ Shaler, Reuben, and..... C. B. Rogers, assignors to..... C. B. and J. Rogers and..... J. Champion..... Shalters, M. R., and Samuel Ray. (See Ray & Shalters.)	Madison, Conn..... Deep River, Conn..... Deep River, Conn..... Jersey City, N. J.....	Cleaner, foot.....	July 31, 1860.

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
29319	Shank, Isaac R.	Buffalo, Va.	Flour chest	July 24, 1860.
29626	Shannon, Jackson	Dakota, Wis.	Cultivators	Aug. 14, 1860.
27836	Sharp, D. P., and L. Mood	Ithaca, N. Y.	Washing machine	April 10, 1860.
27314	Sharp, William	Millport, N. Y.	Carriage wheels, boxes of	Feb. 28, 1860.
29108	Sharps, Christian	Philadelphia, Pa.	Cartridges, packing	July 10, 1860.
30647	Sharps, Christian	Philadelphia, Pa.	Cartridge cases, forming	Nov. 13, 1860.
30765	Sharps, Christian	Philadelphia, Pa.	Fire-arms, revolving, revolving blocks of	Nov. 27, 1860.
30696	Shaver, Archibald G.	New Haven, Conn.	Scalpels	Nov. 20, 1860.
30592	Shaver & Eddy. (See Stanly, Henry, assignor.)	Biddeford, Maine.	Ple crimper	Nov. 6, 1860.
29828	Shaw, Charles A.	Manayunk, Pa.	Gig mills	Aug. 28, 1860.
26712	Shaw, James	Boston, Mass.	Boots and shoes, heels for	Jan. 3, 1860.
28309	Shaw, John S., and John Rix. (See Rix & Shaw.)	Boston, Mass.	Preparing and moulding wood into different forms, method of.	May 15, 1860.
30502	Shaw, Philander	Abington, Mass.	Boot crimping machine	Oct. 23, 1860.
27315	Shaw, Samuel J., and H. J. Batchelder	Marlborough, Mass.	Lantern carrier	Feb. 28, 1860.
30842	Shaw, Samuel J.	Marlborough, Mass.	Shirt bosom expander	Dec. 4, 1860.
28539	Shaw, Thomas, assignor to self and L. N. Brognard	Philadelphia, Pa.	Coal oil or other hydrocarbon fluids under steam generators, furnaces for burning.	May 29, 1860.
29444	Shaw, Thomas, assignor to self and L. Ney Brognard	Philadelphia, Pa.	Boilers, steam, feeding apparatus for	July 31, 1860.
28781	Shaw, William F.	Philadelphia, Pa.	Broiling and roasting by gas, apparatus for	June 19, 1860.
29723	Shearer, William	Atlanta, Ga.	Pumps	Aug. 21, 1860.
30552	Shedd, C. W., assignor to self and R. Jamison, jr.	Addison, Ala.	Mills, grinding	Oct. 30, 1860.
26933	Shedd, J. Herbert, and William Edson	Boston, Mass.	Railroad switches	Jan. 24, 1860.
29919	Sheehan, Thomas	Dunkirk, N. Y.	Iron into steel, method of converting	Sept. 4, 1860.
28782	Sheets, Daniel, Samuel H. Dubois, and John B. Pressey.	Suisun City, Cal.	Reaping and mowing, machines for	June 19, 1860.
26789	Sheffer, J. A.	Rochester, N. Y.	Sifters, coal	Jan. 10, 1860.
29410	Sheldon, D. L. D.	San Francisco, Cal.	Trusses, hernial spring	July 31, 1860.
28414	Shepard, Amos	Southington, Conn.	Sausage filler	May 22, 1860.
30281	Shepard, C., and A. Ernst. (See Ernst & Shepard.)	Scranton, Pa.	Hinges, blind	Oct. 2, 1860.
28204	Shepard, E. R., assignor to Abel Barker	Parkersburg, Ill.	Sluiceway for mill races, floating	May 8, 1860.
27479	Shepard & Co. (See Smith & Brown, assignors.)	Charlestown, Mass.	Scarf pins	Mar. 13, 1860.
27574	Sherburne, William	Poughkeepsie, N. Y.	Vehicles, attaching thills to	Mar. 20, 1860.
29445	Sherman, A.	Union Town, Md.	Churn	July 31, 1860.
29525	Sherman, David, and Robert W. Fenwick, assignors to	Washington, D. C.	Alloy for journal bearings and boxes, metallic	Aug. 7, 1860.
28415	D. Sherman and B. Mills	Union Town, Md.	Evaporating apparatus	May 22, 1860.
29525	Sherman, George	Memphis, Tenn.		
28415	Sherman, Isaac	Cleveland, Ohio		
29525	Sherry, John, et al. (See Card, William B., assignor.)			
28415	Sherwood, C. W., et al. (See Sperry, John, assignor.)			
29525	Sherwood, G. E., et al. (See Reynolds, Edwin F., ass'r.)			
27575	Sherwood, O., jr.	Independence, Iowa	Gates, railroad	Mar. 20, 1860.

28941	Sherwood, Samuel S., assignor to self and Alexander Douglas.	New York, N. Y.	Skirts, skeleton	June 26, 1860.
27480	Sherwood, William H.	Greenwich, Conn.	Composition for artificial stone	Mar. 13, 1860.
28510	Shields, John E.	Washington, D. C.	Hinge butt	May 29, 1860.
28332	Shields, William, assignor to Joseph Lockett and Robert Leake.	Manchester, England	Engraving rollers, &c., machines for	May 15, 1860.
30503	Shinn, Miles I.	Richmond, Ind.	Ballot boxes, apparatus for detecting frauds in	Oct. 23, 1860.
30002	Shipley, Henry W.	Mount Vernon, Ohio	Smut machines	Sept. 11, 1860.
29325	Shipman, James W.	Springfield Centre, N. Y.	Mowing machines	July 24, 1860.
28907	Shipp, J. W., and C. W. Crenshaw	La Grange, Tenn.	Ploughs	June 26, 1860.
29345	Shippey, G. R., et al. (See Hunt, Shippey & Hause.)	Lancaster County, Pa.	Mill stones, machines for dressing	July 24, 1860.
28693	Shirley, Daniel H.	Boston, Mass.	Plates, table	June 12, 1860.
28416	Shiver, C. I.	Camden, S. C.	Ploughs	May 22, 1860.
31004	Shope, Daniel P.	Milesburg, Pa.	Washing machine	Dec. 18, 1860.
27932	Short, Jefferson	Leavenworth, K. T.	Quartz, machine for crushing	April 17, 1860.
28720	Short, Levi, assignor to self and Charles S. Pierce.	Buffalo, N. Y.	Gas, illuminating, apparatus for manufacture of	June 12, 1860.
29526	Shular, Lewis H.	Crawfordsville, Ind.	Car coupling	Aug. 7, 1860.
26790	Shultz, Abraham and Daniel	Reading, Pa.	Washing machine	Jan. 10, 1860.
	Shurtleff, William D., and L. Thorp. (See Thorp & Shurtleff.)			
30379	Sibley, Frank S., ass'r to self and William E. Doubleday.	Brooklyn, N. Y.	Hat brims, method of curling	Oct. 9, 1860.
29014	Sibley, Gideon	Troy, N. H.	Turning cylinders, machine for	July 3, 1860.
29200	Sickels, Frederick E.	New York, N. Y.	Steering vessels, mode of	July 17, 1860.
29316	Sickels, Gerard	Roxbury, Mass.	Water meters	July 24, 1860.
1245	Siddons, John, and James C. Hart	Rochester, N. Y.	Stove plate	May 15, 1860.
29226	Siegl, John N., and Louis Planer. (See Planer & Siegl.)	Upper Holloway, England	Exhausting atmospheric air or gases, apparatus for	July 17, 1860.
30766	Sievier, Robert William, assignor to William Lilley	Napa County, Cal.	Clevis	Nov. 27, 1860.
28205	Sigrist, Frederick	Geneva, N. Y.	Gates	May 8, 1860.
	Sillman, Charles and Lafayette, et al. (See Landon, Frederick, assignor.)			
30256	Silsby, Mynderse & Co. (See Clapp, M. R., assignor.)	Savannah, Ga.	Freezers, ice cream	Oct. 2, 1860.
27837	Silver, James S.	Washington Town, N. J.	Rubber, restoring waste vulcanized	April 10, 1860.
27838	Silver, Albert R., et al. (See Dole, L. A.)	Providence, R. I.	Stud, shirt	April 10, 1860.
	Simon, C. F. Edward			
	Simon, Henry			
	Simonds, Edwin, et al. (See Tarbell, E. W., assignor.)			
	Simonds, E. A. (See Tarbell, Edward W., assignor.)			
	Simonds, N. M. (See Bridges, Lyman, assignor.)			
29411	{ Simonds, Rufus, and	Ludlow, Vt.	Wooden bowls, machines for making	July 31, 1860.
	{ G. N. Goodspeed	Winchendon, Mass.		
30593	Simonet, Louis	New York, N. Y.	Water-proof fabrics	Nov. 6, 1860.
28942	Simonton, T. C., assignor to De Grasse B. Fowler	Paterson, N. J.	Filters	June 26, 1860.
	Simpson, A. J., and J. B. Carrier. (See Carrier & Simpson.)			
27316	Simpson, Andrew L.	Durham, N. H.	Sails, reefing	Feb. 28, 1860.
29829	Simpson, Andrew L.	Durham, N. H.	Ships' sails, working	Aug. 28, 1860.
	Simpson, William M., et al. (See Geraghty, Robert W., assignor.)			
26713	Singer, Joseph	Cleveland, Ohio	Coupling, hose	Jan. 3, 1860.
28109	Singleton, Benjamin	Portsmouth, Va.	Fire-arms, hammer guard for	May 1, 1860.

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
26791	Sisson, Samuel A., and A. Stohler. (See Stohler & Sisson.)	New Haven, Conn.	Shavings for mattresses, machine for cutting.	Jan. 10, 1860.
30935	Skinner, Franklin.	West Berkshire, Vt.	Pens, fountain.	Dec. 18, 1860.
27078	Skinner, Smith A.	Davenport, Iowa	Bending mould boards for ploughs, machine for.	Feb. 7, 1860.
29527	Skinner, W. W.	Bennington, Vt.	Spinning frames, driving bands for.	Aug. 7, 1860.
30594	Slade, Norman H., and John N. Scranton.	Newark, N. J.	Door latches.	Nov. 6, 1860.
27576	Slaight, Thomas.	South Reading, Mass.	Pumps.	Mar. 20, 1860.
30357	Slaon, William N.	Cadiz, Ohio	Ploughs.	Oct. 9, 1860.
29809	Stemmons, Mathew G.	Franklin, Ind.	Planters, seed.	June 26, 1860.
26877	Sloan, Hervey.	Pittsburg, Pa.	Distilling apparatus.	Jan. 17, 1860.
27011	Sloan, J. Q., et al. (See Smith, James L., assignor.)	Pittsburg, Pa.	Valve, balanced slide.	Jan. 31, 1860.
29199	Sloan, John.	Buffalo, N. Y.	Stave machines.	July 17, 1860.
27161	Sloan, William M.	Buffalo, N. Y.	Staves, machine for dressing.	Feb. 14, 1860.
30257	Slocumb, Samuel.	Cambridge, Mass.	Inkstand.	Oct. 2, 1860.
30936	Slocum, J. J.	New York, N. Y.	Engines, rotary.	Dec. 18, 1860.
30767	Slocum, Joseph.	Syracuse, N. Y.	Harrows, cultivating.	Nov. 27, 1860.
28206	Slocum, W. S., and Charles Diedrick. (See Diedrick & Slocum.)	Canton, Ohio.	Harvesters, making guard fingers for.	May 8, 1860.
29627	Slough, George W., assignor to E. Ball.	Hillsborough, Ohio	Traps, animal.	Aug. 14, 1860.
27577	Slusser, George.	Bound Brook, N. J.	Sewing machines.	Mar. 20, 1860.
27653	Smart, Robert T., J. W. and A. J.	Troy, N. Y.	Paper, straw, manufacture of.	Mar. 27, 1860.
28612	Smead, E. A.	Tioga, Pa.	Corn shellers.	June 5, 1860.
28783	Smith, A. B.	Clinton, Pa.	Harvesters, raking and binding apparatus for.	June 19, 1860.
30504	Smith, Abijah.	Kingston, N. Y.	Stones, machines for dressing.	Oct. 23, 1860.
26865	Smith, Albert M.	New York, N. Y.	Match safes, pocket.	Jan. 17, 1860.
28207	Smith, Alfred E.	Bronxville, N. Y.	Axle boxes, making.	May 8, 1860.
30768	Smith, Anson. (See Smith, Henry C., assignor.)	Girard, Ill.	Drills, seed.	Nov. 27, 1860.
30003	Smith, Arnton.	Knoxville, Texas.	Cotton cleaners.	Sept. 11, 1860.
28908	Smith, Butler & Hosford. (See Butler, Hosford & Smith.)	Evans, N. Y.	Window blinds.	June 26, 1860.
29412	Smith, Charles E.	Nauvoo, Ill.	Planters, corn.	July 31, 1860.
27745	Smith, Charles W.	Glenn Springs, S. C.	Ploughs.	April 3, 1860.
28443	Smith, Christopher.	Springfield, Vt.	Hooks and eyes.	May 22, 1860.
30258	Smith, David H. and E. E.	New York, N. Y.	Boiler, steam.	Oct. 2, 1860.
27261	Smith, David M., assignor to self, H. H. and A. C. Mason.	Indianapolis, Ind.	Moulding machines.	Feb. 21, 1860.
29523	Smith, Erastus W., and John H. Mars.	Burlington, N. J.	Reaping and mowing machines.	Aug. 7, 1860.
30691	Smith, Elisha M., assignor to self and Elbridge G. Mayhew.	Momence, Ill.	Plough plates from molten steel, making.	Nov. 20, 1860.
	Smith, Elizabeth M.			
	Smith, F., and J. B. Low. (See Winham, M. A.)			
	Smith, F. F.			

27654	Smith, George	Baltimore, Md.	Cultivators	Mar. 27, 1860.
28694	Smith, George	Macon, Ga.	Hose pipe	June 12, 1860.
1219	Smith, George W.	Hartford, Conn.	Pitchers, ice	April 3, 1860.
1286	Smith, Garrettsen, and Henry Brown, assignors to Cox, Whiteman, & Cox.	Philadelphia, Pa.	Stove, cooks'	July 3, 1860.
1281	Smith, Garrettsen, and Henry Brown, assignors to Leibrandt & McDowell.	Philadelphia, Pa.	Stove, cooking	July 3, 1860.
1282	Smith, Garrettsen, and Henry Brown, assignors to Leibrandt & McDowell.	Philadelphia, Pa.	Stove, cooking	July 3, 1860.
1283	Smith, Garrettsen, and Henry Brown, assignors to Abbott & Noble.	Philadelphia, Pa.	Stove, cooks'	July 3, 1860.
1284	Smith, Garrettsen, and Henry Brown, assignors to Abbott & Noble.	Philadelphia, Pa.	Stove, cooks'	July 3, 1860.
1285	Smith, Garrettsen, and Henry Brown, assignors to Abbott & Noble.	Philadelphia, Pa.	Stove, cooks'	July 3, 1860.
1288	Smith, Garrettsen, and Henry Brown, assignors to Samuel Smith.	Philadelphia, Pa.	Stove, cooks', plates for	July 17, 1860.
1322	Smith, Garrettsen, and Henry Brown, assignors to North, Chase & North.	Philadelphia, Pa.	Stoves	Oct. 2, 1860.
1323	Smith, Garrettsen, and Henry Brown, assignors to Sheppard & Co.	Philadelphia, Pa.	Stove, cooks', plates of a	Oct. 2, 1860.
1362	Smith, Garrettsen, and Henry Brown, assignors to Leibrandt & McDowell.	Philadelphia, Pa.	Stove	Dec. 18, 1860.
30429	Smith, H. B.	Lowell, Mass.	Slat machine, blind	Oct. 16, 1860.
27391	Smith, Hamilton E.	Philadelphia, Pa.	Washing machine	Mar. 6, 1860.
29830	Smith, Hamilton E.	Philadelphia, Pa.	Washing machine	Aug. 28, 1860.
27870	Smith, Henry C., assignor to Anson Smith	Cleveland, Ohio	Washing machine	April 10, 1860.
29920	Smith, Henry C.	Clarksville, Ohio	Mortising machines	Sept. 4, 1860.
27746	Smith, Henry G.	Muscatine, Iowa	Metal heads for brooms	April 3, 1860.
28511	Smith, Henry K.	Philadelphia, Pa.	Car windows, sash supporter for	May 29, 1860.
29628	Smith, Henry T.	Washington, D. C.	Bedstead fastening	Aug. 14, 1860.
29041	Smith, Henry W. and S. D. (See Jones, Samuel H., ass'r.)	Boston, Mass.	Harmoniums	July 3, 1860.
27933	Smith, Horace, and Daniel B. Wesson	Springfield, Mass.	Cartridge, filling metallic	April 17, 1860.
30990	Smith, Horace, and Daniel B. Wesson	Springfield, Mass.	Revolvers	Dec. 18, 1860.
28016	Smith, Irulus R.	Elgin, Ill.	Cultivators	April 24, 1860.
30769	Smith, Isaac	Albany, N. Y.	Stove grates	Nov. 27, 1860.
29629	Smith, James	Norfolk, Va.	Ploughs	Aug. 14, 1860.
28943	Smith, James L., assignor to self and James Q. Sloan	Neoga, Ill.	Planters, corn	June 26, 1860.
28784	Smith, J. P.	Hummelstown, Pa.	Corn shellers	June 19, 1860.
29724	Smith, J. R., et al. (See West, Smith, and others.)	New York, N. Y.	Caps, military	Aug. 21, 1860.
29109	Smith, James S.	Portsmouth, Va.	Crane	July 10, 1860.
29315	Smith, James T.	Portsmouth, Va.	Threshing peas and beans, machine for	July 24, 1860.
29110	Smith, John A. C. J.	Philadelphia, Pa.	Pumps	July 10, 1860.
26935	Smith, Jonathan	Dorchester, Mass.	Sails, attaching bonnets to	Jan. 24, 1860.
27162	Smith, Jonathan	Tiffin, Ohio	Drills, seed	Feb. 14, 1860.
26955	Smith, Joseph, assignor to self and Robert R. Lynd	Cincinnati, Ohio	Shears	Jan. 24, 1860.
27747	Smith, Joseph	New York, N. Y.	Curtain fixtures	April 3, 1860.
28948	Smith, Joseph A., and Isaac Orvis, administrator of L. M. Orvis, deceased	Fond-du-Lac, Wis.	Printing press	June 26, 1860.
27079	Smith, Josiah M.	Oakfield, Wis.	Sewing machines	Feb. 7, 1860.
28310	Smith, Marvin	Somers, N. Y.	Peach parer	May 15, 1860.
		New Haven, Conn.		

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
26792	Smith, O. J., et al. (See Truax, Jacob W., assignor.)	Stockport, N. Y.	Leather, machinery for finishing	Jan. 10, 1860.
27481	Smith, R. L. and C.	New York, N. Y.	Street sweeping machine	Mar. 13, 1860.
27839	Smith, Robert, and C. L. Crowell. (See Massey, William, assignor.)	New York, N. Y.	Streets, machine for sweeping	April 10, 1860.
28311	Smith, Robert A.	New York, N. Y.	Nut cracker	May 15, 1860.
1249	Smith, Robert A.	New York, N. Y.	Nut cracker	June 12, 1860.
26793	Smith, Rogers & Co. (See Godfrey, Edward A., ass't.)	Union Springs, N. Y.	Tile machines, drain	Jan. 10, 1860.
28512	Smith, Samuel. (See Smith, G., and H. Brown, assignors.)	Troy, N. Y.	Car wheels	May 29, 1860.
29831	Smith, Samuel D. (See Smith, Henry W., assignor.)	Marietta, Ohio.	Lamps	Aug. 28, 1860.
27237	Smith, Samuel J.	Cincinnati, Ohio.	Malt kilns, floors of	Feb. 21, 1860.
26821	Smith, Samuel J.	Pittsburg, Pa.	Car wheels, railroad	Jan. 10, 1860.
30595	Smith, Samuel M., and Caleb Winegar.	Elizabethport, N. J.	Harvesters, cutting apparatus of	Nov. 6, 1860.
1208	Smith, S. M., and C. Snyder. (See Snyder & Smith.)	Newport, R. I.	Stoves	Feb. 21, 1860.
28786	Smith, Solomon P.	Newport, R. I.	Stoves	June 19, 1860.
29921	Smith, Solomon S., et al. (See Godfrey, Barnes, Blish & Smith.)	Trenton, N. J.	Piles by atmospheric pressure, driving	Sept. 4, 1860.
28785	Smith, T. Briggs.	Birmingham, Conn.	Sewing machines	June 19, 1860.
28208	Smith, Thomas P., et al. (See Turner & Smith.)	New York, N. Y.	Barrels, tools for opening	May 8, 1860.
27600	Smith, William, assignor to self, David E. Park, and James Park, jr.	Baltimore, Md.	Fire-arms, breech loading	Mar. 20, 1860.
27840	Smith, William G.	North Bridgewater, Mass.	Boots and shoes, edge planes for	April 10, 1860.
27166	Snedeker, David.	Watertown, Mass.	Paper for book binders, folding	Feb. 14, 1860.
27392	Sneider, C. Edward, assignor to Thomas Poultney.	Watertown, Mass.	Paper, machine for folding and pasting	Mar. 6, 1860.
27659	Snell, E. S.	Auburn, Miss.	Cultivators, cotton	Mar. 27, 1860.
29630	Snow, George K.	Boston, Mass.	Steering apparatus	Aug. 14, 1860.
28695	Snow, Nathaniel, jr.	West Meriden, Conn.	Lamps	June 12, 1860.
27743	Snow, Oliver and Heman S.	Pittsburg, Pa.	Boilers, steam, feed water arrangement for	April 3, 1860.
30358	Snowdon, Thomas.	Hawley, Pa.	Crane, portable	Oct. 9, 1860.
30359	Snyder, C., and S. M. Smith.	Dayton, Ohio.	Stalks, machine for pulling and cutting	Oct. 9, 1860.
30991	Snyder, Henry	Fredericksburg, Va.	Shutter operator	Dec. 18, 1860.
30891	Solan, John	New Brunswick, N. J.	Shirred goods, machines for making	Dec. 11, 1860.
27317	Solis, Richard.	Sumneytown, Pa.	Boilers, steam, safety cases for	Feb. 28, 1860.
30992	Solliday, Samuel	Sumneytown, Pa.	Boiler, steam	Dec. 18, 1860.
29725	Soltman, Heinrich, et al. (See Koehler, Joseph, ass't.)	Mitchell Station, Va.	Car brake, railroad	Aug. 21, 1860.
28017	Somerville, Walter, jr.	New York, N. Y.	Horses from interfering, device to prevent	April 24, 1860.
	Somerville, William			

29336	Somes, D. E.	Bliddeford, Me.	Boots and shoes, heel for.	July 24, 1860.
30094	Somes, D. E.	Bliddeford, Me.	Boots and shoes, heel for.	Sept. 18, 1860.
30648	Somes, D. E.	Bliddeford, Me.	Heel shave.	Nov. 13, 1860.
30658	Somes, D. E., assignor to James S. Anderson.	Bliddeford, Me.	Curing provisions.	Nov. 13, 1860.
30770	Somes, Daniel E.	Bliddeford, Me.	Packing meats, construction of buildings for.	Nov. 27, 1860.
30259	Soule, S. W., and D. B. Tiffany. (See Tiffany & Soule.)	Cincinnati, Ohio.	Printing addresses on newspapers, &c., apparatus for.	Oct. 2, 1860.
27482	Soule, Samuel W.	Richmond, Me.	Hawse pipe.	Mar. 13, 1860.
26794	Southard, T. J.	Boston, Mass.	Evaporating saccharine juices, apparatus for.	Jan. 10, 1860.
27243	Southworth, Alva M.	Dorchester, Mass.	Sail cringles, attachment for.	Feb. 21, 1860.
28815	Sowle, Rhoda, administratrix of David Sowle, deceased.	Fall River, Mass.	Lozenge machines.	June 19, 1860.
27163	Spafford, William W.	Petersborough, N. H.	Car wheels, railroad.	Feb. 14, 1860.
30592	Sparks, Oliver.	Shelbina, Mo.	Ploughs.	Dec. 11, 1860.
30004	Sparrow, John. (See Johnson, J. B., assignor.)	Westminster, Mass.	Wood, machines for bending.	Sept. 11, 1860.
27194	Spaulding, Amos P., and Elisha Pierce.	Philadelphia, Pa.	Stamps, post office.	Feb. 14, 1860.
27841	Spear, James, assignor to self and D. C. Enos.	New York, N. Y.	Corn huskers.	April 10, 1860.
29413	Spear, N. T.	Hazlehurst, Miss.	Cultivators, cotton.	July 31, 1860.
30260	Spellier, Jesse.	Philadelphia, Pa.	Fire-arms, revolving.	Oct. 2, 1860.
29414	Spellier, August.	Boston, Mass.	Boiling and condensing apparatus.	July 31, 1860.
29015	Spence, George S. G.	Boston, Mass.	Distilling sea water, apparatus for.	July 3, 1860.
27012	Spence, George S. G.	Boston, Mass.		
27393	Spence, William P. (See Walker, Sylvanus, assignor.)			
28613	Spence, William P., and J. F. Adams. (See Walker, Sylvanus, assignor.)			
30261	Spencer, C. M.	Manchester, Conn.	Thread, machinery for spooling.	Jan. 31, 1860.
29922	Spencer, C. M.	South Manchester, Conn.	Fire-arm, self loading.	Mar. 6, 1860.
26866	Spencer, Charles F.	Rochester, N. Y.	Screws and nuts, anti-friction.	June 5, 1860.
30164	Spencer, Charles F.	Rochester, N. Y.	Coupling hose.	Oct. 2, 1860.
28513	Spencer, John M.	Enfield, Maine.	Mowing machines, hand.	Sept. 4, 1860.
30165	Spencer, Kirby.	Minneapolis, Minn.	Seat for water closet.	Jan. 17, 1860.
27080	Spencer, Kirby.	Minneapolis, Minn.	Refrigerator.	Sept. 25, 1860.
29122	Spencer, Thomas.	Syracuse, N. Y.	Salt, common, manufacture of.	May 29, 1860.
	Spencer, Thomas.	Syracuse, N. Y.	Salt, common, manufacture of.	Sept. 25, 1860.
	Sperry, V. O. and J. R.	Mansfield, Pa.	Animal trap.	Feb. 7, 1860.
	Sperry, John, assignor to self and C. W. Sherwood.	New York, N. Y.	Enamelling picture frames, &c., tool for.	July 10, 1860.
	Sperry, Samuel A., and G. W. Effner. (See Effner & Sperry.)			
	Spies, F., and John Deckelmann. (See Deckelmann & Spiess.)			
28514	Spiller, Henry J.	Cincinnati, Ohio.	Printers, roller boxes for.	May 29, 1860.
	Spoehr, F., and Frederick Roos. (See Roos & Spoehr.)			
	Spofford, N. H., et al. (See Blondin, J. F., assignor.)			
	Sprague, R., and R. Taylor. (See Taylor & Sprague.)			
	Sprecher, William D., et al. (See Musselman, Henry D., assignor.)			
30430	Sprecher, William D., et al. (See Swope, Zuriel, assignor.)	Battle Creek, Mich.	Weighing machine, grain.	Oct. 16, 1860.
26795	Squier, D., and E. A. Preston.	Brooklyn, N. Y.	Balances, hydrostatic.	Jan. 10, 1860.
30593	Squire, Samuel.	Cold Spring, N. Y.	Water, apparatus for raising.	Dec. 18, 1860.
	Squires, Jacob D.			
	Squires, R., and John G. Forbes. (See Fisk, A. D., assignor.)			
28212	Squyer, Oscar C.	West Dresden, N. Y.	Balance, compensating spring.	May 8, 1860.
29201	Stafford, C. W.	Burlington, Iowa.	Ploughs, mole.	July 17, 1860.
30505	Stafford, Ira A.	Essex, N. Y.	Furniture castor.	Oct. 23, 1860.
30506	Stafford, Ira A.	Essex, N. Y.	Grain, elevating, cleaning, and bagging, machine for.	Oct. 23, 1860.

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
26796	Staman, J. K.	Mifflin, Ohio.	Cultivators.	Jan. 10, 1860.
28614	Staman, John K.	Mifflin, Ohio.	Boot and shoe wiper.	June 5, 1860.
28787	Stamm, Jacob, and John Shubert.	Sardinia, Ohio.	Spoke machines.	June 19, 1860.
1289	Stanard, Walter W., assignor to S. S. Jewett and F. H. Root.	Buffalo, N. Y.	Stove, cooks'. (Design)	July 24, 1860.
1298	Stanard, Walter W., assignor to S. S. Jewett and F. B. Root.	Buffalo, N. Y.	Stove, cooks'. (Design)	July 31, 1860.
29415	Stanard, Walter W.	Buffalo, N. Y.	Refrigerator.	July 31, 1860.
1297	Stanard, Walter W., assignor to S. S. Jewett and F. B. Root.	Buffalo, N. Y.	Stove, parlor. (Design)	July 31, 1860.
1296	Stanard, Walter W., assignor to S. S. Jewett and F. B. Root.	Buffalo, N. Y.	Stove, cooks'. (Design)	July 31, 1860.
1316	Stanard, Walter W., assignor to S. S. Jewett and F. H. Root.	Buffalo, N. Y.	Stove, cooks'. (Design)	Sept. 25, 1860.
1317	Stanard, Walter W., assignor to S. S. Jewett and F. H. Root.	Buffalo, N. Y.	Stove, cooks'. (Design)	Sept. 25, 1860.
27164	Stanford, Otis W.	Cincinnati, Ohio.	Mills, grinding.	Feb. 14, 1860.
28018	Stanford, Otis W.	Cincinnati, Ohio.	Horse powers.	April 24, 1860.
28696	Stanford, Otis W.	Cincinnati, Ohio.	Churn.	June 12, 1860.
26797	Stanley, George A.	Cleveland, Ohio.	Candles, machinery for moulding.	Jan. 10, 1860.
28798	Stanley, George A.	Cleveland, Ohio.	Candles, machinery for moulding.	Jan. 10, 1860.
28210	Stanley, George A.	Cleveland, Ohio.	Candle mould boxes.	May 8, 1860.
28209	Stanley, George A.	Cleveland, Ohio.	Candle moulding apparatus.	May 8, 1860.
29416	Stanley, George A.	Cleveland, Ohio.	Candles, apparatus for moulding.	July 31, 1860.
30360	Stanley, Henry. (See Stover, George, assignor.)	Troy, N. Y.	Propellers in their application to vessels.	Oct. 9, 1860.
29726	Stannard, George J., et al. (See Ross, Robert, assignor.) Stanton, S., and W. J. Anderson. (See Anderson & Stanton.)	Richmond, Va.	Ploughs.	Aug. 21, 1860.
30843	Starbuck, N. B. and G. H., et al. (See Webber, Elbridge, assignor.)	New York, N. Y.	Revolvers.	Dec. 4, 1860.
29529	Starke, P. H.	Wataga, Ill.	Tire, machine for upsetting.	Aug. 7, 1860.
28697	Starkweather, A., and W. A. Glidden. (See Glidden & Starkweather.)	Philadelphia, Pa.	Inoculating, apparatus for.	June 12, 1860.
30361	Starr, Eben T.	Plaquemine, La.	Harvesters, cane.	Oct. 9, 1860.
27081	Starrett, Mark, et al. (See Buxton, Levi W., assignor.)	Cincinnati, Ohio.	Saw logs, method of rossing.	Feb. 7, 1860.
30937	Statler, Casper V.	Providence, R. I.	Spindles, oiling.	Dec. 18, 1860.
1344	Staudt, Alfred. St. Dizier, Achilles. Stearnes, E. H. (See Jenks & Steere.) Steere, F. A., and R. W. Jenks, jr. (See Jenks & Steere.) Steere, Erastus N. Steffe, J., and S. H. Sallor. (See Sallor & Steffe.) Steffe, J., and S. H. Sallor, ass'rs to Cox, Whiteman & Cox.	Philadelphia, Pa. (Design)	Stove. (Design)	Nov. 13, 1860.

1363	Steffe, Jacob, assignor to F. & G. Haucks.	Philadelphia, Pa.	Stove, cooking	Dec. 18, 1860.
26356	Steger, Joseph, assignor to James M. Frear.	Matteawan, N. Y.	Levels to a square, spirit, device for attaching.	Jan. 24, 1860.
27578	Stein, William E.	New York, N. Y.	Dress lifter.	Mar. 20, 1860.
28788	Steinbrener, A., and M. Messer. (See Messer & Steinbrener.)			
28816	Steiner, Jacob S.	St. Louis, Mo.	Sewing machines.	June 19, 1860.
28817	Steiner, John H., assignor to self and James E. Thomson	Philadelphia, Pa.	Car wheels, railroad.	June 19, 1860.
29334	Steiner, John H., assignor to self and James E. Thomson	Philadelphia, Pa.	Railroad brakes.	June 19, 1860.
27165	Steinmetz, William	Philadelphia, Pa.	Eyelet machines.	April 17, 1860.
28516	Stelle, Daniel D.	New Brunswick, N. J.	Acoustic apparatus.	Feb. 14, 1860.
28211	Stephens, Lemuel	Philadelphia, Pa.	Fertilizers.	May 29, 1860.
30262	Stephenson, George	Zionsville, Ind.	Evaporating liquids, apparatus for.	May 8, 1860.
28417	Stephenson, George A.	Paw-Paw, Mich.	Reapers and mowers.	Oct. 2, 1860.
	Stephenson, James M.	Anderson, Ind.	Pumps.	May 22, 1860.
	Stephenson, Tomkins & Leland. (See Leland, E. A., assignor.)			
29111	Sterling, William	Gallion, Ohio.	Gas pipes.	July 10, 1860.
28789	Sterling, Ambrose S.	Buffalo, N. Y.	Stoves, cooking, boiler for.	June 19, 1860.
28042	Stetson, Bradford, assignor to self and Elmer Townsend.	Uxbridge, Mass.	Skates.	April 24, 1860.
29654	Stetson, Bradford, assignor to self and Elmer Townsend.	Uxbridge, Mass.	Water wheels, turbine.	Aug. 14, 1860.
29632	Stetson, W. S.	Baltimore, Md.	Harvesters.	Aug. 14, 1860.
30167	Stetson, W. S.	Baltimore, Md.	Reaping machines.	Sept. 25, 1860.
29112	Stevens, Elbridge G.	Biddeford, Maine	Syringes.	July 10, 1860.
29016	Stevens, George R.	Clarksville, Mo.	Horses, shoeing.	July 3, 1860.
27762	Stevens, James H. (See Hardie, Jason W., assignor.)			
30771	Stevens, John, assignor to H. Brind	New York, N. Y.	Sewing machine needles, mechanism for threading.	April 3, 1860.
27483	Stevens, L.	Dover, Ky.	Cultivators.	Nov. 27, 1860.
30548	Stevens, Marcus	Detroit, Mich.	Chair, self-adjusting reclining.	Mar. 13, 1860.
29320	Stevens, Silas	Worcester, Mass.	Tool holder.	Oct. 30, 1860.
28698	Stevens, Sylvester.	Sacramento, Cal.	Press, hay.	July 24, 1860.
1200	Stevens, William H.	Syracuse, N. Y.	Gun, toy.	June 12, 1860.
1246	Stevens, William W., assignor to N. P. Richardson & Co.	Portland, Me.	Stoves, cooking.	Feb. 14, 1860.
27744	Stevens, William W., assignor to N. P. Richardson & Co.	Portland, Me.	Stove, parlor.	May 15, 1860.
30263	Stever, Jeremiah.	Bristol, Conn.	Stones, &c., portable stamping machine for crushing.	April 3, 1860.
30005	Stewart, John A.	Philadelphia, Miss.	Ploughs.	Oct. 2, 1860.
27394	Stewart, Stephen	Philadelphia, Pa.	Doors and gates, closing.	Sept. 11, 1860.
30006	Stewart, Thomas	Philadelphia, Pa.	Valves, slide, for steam engines.	Mar. 6, 1860.
28110	Stewart, Thomas	Pittsburg, Pa.	Railroads, safety guard for.	Sept. 11, 1860.
27579	Stewart, Walter.	Natchez, Miss.	Bales, cotton, iron ties for.	May 1, 1860.
26714	Stewart, William	Philadelphia, Pa.	Mills, grinding.	Mar. 20, 1860.
28312	Stickler, Joseph W.	Orange, N. J.	Vegetable cutter.	Jan. 3, 1860.
27318	Stickney, G. H., et al. (See Proctor, George K., ass'r.)			
28910	Stiles, Lydia W.	Brooklyn, Ohio.	Butter worker.	May 15, 1860.
28911	Stille, James.	Cincinnati, Ohio.	Bread slicer.	Feb. 28, 1860.
29553	Stillman, O. M.	Stonington, Conn.	Air engines.	June 26, 1860.
30362	Stillman, O. M.	Stonington, Conn.	Air engines.	June 26, 1860.
29327	Stinnett, Johnson, and Vaughn. (See Johnson, Vaughn & Stinnett.)			
	Stockton, Volney, assignor to self and Mitchell & Ram-	Williamsburg, Ohio.	Chair bottom, metallic.	Aug. 7, 1860.
	meisburg.			
	Stoddard, Isaac.	Great Bend, Pa.	Horse power, propelling machinery by.	Oct. 9, 1860.
	Stoddard, J. C.	Worcester, Mass.	Hay, teeth for scattering.	July 24, 1860.

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
30007	Stoddard, J. C.....	Worcester, Mass.....	Rakes, horse.....	Sept. 11, 1860.
28790	Stockel, A., and George Koch. (See Koch & Stockel.)	New York, N. Y.....	Skirt hoops.....	June 19, 1860.
27413	Stokes, Robert, and David John Jones.....	Manchester, N. H.....	Knife sharpener.....	Mar. 6, 1860.
28313	Stokes, Septimus C., assignor to self and Benjamin S. Stokes..			
27842	Stoler, Abraham, and Samuel A. Sisson.....	Bristol, Pa.....	Harvesters.....	May 15, 1860.
27013	{ Stombs, D. S., and.....	Newport, Ky.....	Distillation of coal oil.....	April 10, 1860.
27843	{ Julius Brace.....	Point Creek, Va.....		Jan. 31, 1860.
30938	{ Stone, George A.....	Roxbury, Mass.....	Steam, apparatus for superheating.....	April 10, 1860.
	{ James A. Whipple.....	Roxbury, Mass.....	Boiler, steam.....	Dec. 18, 1860.
	{ Stone, Sydney M.....	Boston, Mass.....	Ventilating buildings, means for.....	
28818	Storer, Charles, and William R. Bennett. (See Bennett & Storer.)	New Haven, Conn.....		
	Storer, George, assignor to self and Stanley Rule and Level Company.	New Britain, Conn.....	Finishing works in wood and metal, machine for.....	June 19, 1860.
27167	Story, J., et al. (See Carey, Augustus C., assignor.)	Woonsocket, R. I.....	Paper rag engines.....	Feb. 14, 1860.
28111	Storm, Joseph.....	New York, N. Y.....	Valve for steam boilers, safety.....	May 1, 1860.
29749	Storm, William Mont.....	Cincinnati, Ohio.....	Jolists, machine for dressing.....	Aug. 21, 1860.
30363	Stout, S. D.....	Charleston, Tenn.....	Pumps.....	Oct. 9, 1860.
29633	Stover, Henry D.....	New York, N. Y.....	Planing, rotary cutter head for.....	Aug. 14, 1860.
29727	Stover, Henry D.....	New York, N. Y.....	Shaping and moulding machine.....	Aug. 21, 1860.
29728	Stover, Henry D.....	New York, N. Y.....	Planing machine.....	Aug. 21, 1860.
29923	Stover, Henry D.....	New York, N. Y.....	Planing machine.....	Sept. 4, 1860.
30993	Stover, Henry D.....	New York, N. Y.....	Planing machines, wood.....	Dec. 18, 1860.
28615	Stover, Prollman.....	West Alexandria, Ohio.....	Planters, corn.....	June 5, 1860.
27319	Stow, Orson W.....	Plantville, Conn.....	Metal, bending sheet.....	Feb. 28, 1860.
28019	Stowe, Calvin.....	Braceville, Ohio.....	Corn shock binders.....	April 24, 1860.
28418	Stowell, B. T.....	Quincy, Ill.....	Planters, corn.....	May 22, 1860.
27601	Stowell, John, assignor to self and Daniel F. White.....	Charlestown, Mass.....	Boilers, steam, feed water regulator for.....	Mar. 20, 1860.
30008	Straight, Levi F.....	Fairbury, Ill.....	Planters, corn.....	Sept. 11, 1860.
28213	Strange, Joseph W.....	Bangor, Me.....	Dress hook, self-fastening.....	May 8, 1860.
30009	Strange, Joseph W.....	Bangor, Me.....	Dividers, spring.....	Sept. 11, 1860.
29113	Stratton, Anthony.....	Brooklyn, N. Y.....	Gas tubes, flexible joints for.....	July 10, 1860.
28616	Stratton, James.....	Brooklyn, N. Y.....	Water in pipes, device for regulating the pressure of.....	June 5, 1860.
30507	Stratton, Nathaniel M.....	Newport, N. Y.....	Fences.....	Oct. 23, 1860.
26715	Stratton, Nelson P.....	Waltham, Mass.....	Watches.....	Jan. 3, 1860.
30772	Stratton, Nelson P.....	Nashua, N. H.....	Watches, method of winding.....	Nov. 27, 1860.
26932	Stratton, Richard A.....	Philadelphia, Pa.....	Leather, machines for polishing.....	Jan. 24, 1860.
30773	Street, Henry G.....	Liberty, Miss.....	Cultivators, cotton.....	Nov. 27, 1860.
29634	Street, Hugh M.....	Denmark, Tenn.....	Gearing.....	Aug. 14, 1860.
30010	Strick, Daniel.....	Chambersburg, Pa.....	Rakes, horse.....	Sept. 11, 1860.
30166	Strode, Thomas T.....	Mortonville, Pa.....	Clock, calendar.....	Sept. 25, 1860.

30264	Strode, Thomas T.	Mortonville, Pa.	Adding machines	Oct. 2, 1860.
27844	Stroup, A. B.	Waldron, Ind.	Bed cord tightener	April 10, 1860.
30508	Stuart, D., and R. Peterson. (See Mahan, John L., assignor.)	Marblehead, Mass.	Boot and shoe heels, machine for dressing	Oct. 23, 1860.
30698	Stuart, John S., and Asael L. Corson.	Claremont, N. H.	Boats, ship's, attaching and detaching	Nov. 20, 1860.
30659	Stuart & Peterson. (See Martino & Horton, assignors.)	Maquon, Ill.	Plough, mole	Nov. 13, 1860.
30939	Stuart & Peterson. (See Cantelo, W. L., assignor.)	New York, N. Y.	Fire escapes	Dec. 18, 1860.
28112	Stuart & Peterson. (See Horton & Martino, assignors.)	Utica, N. Y.	Furnaces, hot air	May 1, 1860.
28132	Stubbs, Robert S.	Utica, N. Y.	Lamps	May 1, 1860.
29530	Sturdevant, Owen, assignor to self and J. S. Gregory.	Utica, N. Y.	Stoves	Aug. 7, 1860.
28913	Stuber, John, assignor to John Carton.	Charlestown, Va.	Planters, cotton seed	June 26, 1860.
30364	Stuber, Jakob, Friedrich Frank and Peter D. Tobie.	Indianapolis, Ind.	Shingle machines, device for operating tilting tables in	Oct. 9, 1860.
27244	Suddith, William A. and John F.	New York, N. Y.	Thread, tool for cutting and pulling	Feb. 21, 1860.
29635	Suitt, James B.	Detroit, Mich.	Cars, sleeping	Aug. 14, 1860.
28914	Sullivan, Timothy.	New York, N. Y.	Seeding machines	June 26, 1860.
26716	Surgi, Eugene, and Henry Port. (See Port & Surgi.)	Kensico, N. Y.	Callipers	Jan. 3, 1860.
26717	Sutherland, J. B.	New York, N. Y.	Evaporating, apparatus for	Jan. 3, 1860.
27168	Sutter, Joseph.	New York, N. Y.	Valves, slide	Feb. 14, 1860.
29202	Sutton, Charles D.	New York, N. Y.	Sewing machines	July 17, 1860.
28314	Sutton, John.	Lowell, Mass.	Water wheels	May 15, 1860.
27245	Sutton, Noah.	Washington, D. C.	Projectile for fire-arms	Feb. 21, 1860.
29750	Sutton, William A.	New York, N. Y.	Chair, folding	Aug. 21, 1860.
28517	Swain, A. M.	Valley River Falls, Va.	Cars for transporting cattle, &c.	May 29, 1860.
29017	Swain, Benedict.	Wheeling, Va.	Glass goblets, &c., moulds for	July 3, 1860.
28912	Swan, James H., assignor to Aras G. Williams.	Chicago, Ill.	Press, tobacco	June 26, 1860.
28944	Swan, Josiah S. (See Couch, Joseph J., assignor.)	Washington, D. C.	Hinges	June 26, 1860.
27748	Swearengen, Lee	Columbia, Texas	Planters, cotton seed	April 3, 1860.
27246	Sweeney, Andrew J.	Cincinnati, Ohio	Mills, conical, grinding	Feb. 21, 1860.
29417	Sweeney, John	Napa, Cal.	Blowers, fan	July 31, 1860.
27169	Sweeney, Arthur W., assignor to self and Charles N. Tyler.	Brooklyn, N. Y.	Bedstead, invalid's	Feb. 14, 1860.
27500	Swope, Zuriel, assignor to self, H. D. Musselman, and William D. Sprecher.	Lancaster, Pa.	Lamps	Mar. 13, 1860.
27170	Symmes, H. K.	Newton, Mass.	Gas lights, mode of extinguishing	Feb. 14, 1860.
29330	Taber, B. W.	Quaker Street, N. Y.	Chimneys	July 24, 1860.
29203	Taber, Isaiah W.	New Bedford, Mass.	Lamps	July 17, 1860.
27320	Taft, George C.	Worcester, Mass.	Drill	Feb. 28, 1860.
28020	Taft, George C.	Worcester, Mass.	Presses, letter copying	April 24, 1860.
30431	Taft, George C.	Worcester, Mass.	Wrench, screw	Oct. 16, 1860.
30774	Taft, George E.	Worcester, Mass.	Drill frames	Nov. 27, 1860.
27845	Talbot, Darwin.	Potsdam, N. Y.	Presses, cheese	April 10, 1860.
30265	Tallman, William	Ironton, Mo.	Saws	Oct. 2, 1860.
27656	Tambling, William H.	Providence, R. I.	Horse shoe nail machines	Mar. 27, 1860.
30432	Taney, John	Berlin, Wis.	Bed bottoms	Oct. 16, 1860.
27935	Tannhill, Joseph F.	Austin, Texas	Wells, artesian, apparatus for boring	April 17, 1860.
29636	Tanner, Albert W., and Orlando P. Gorton.	Stanton, Va.	Planters, seed	Aug. 14, 1860.
27749		Paw Paw, Mich.	Curtain fixture, window	April 3, 1860.

Patentees of inventions and designs, 1860.

No.	Name of patentec.	Residence.	Invention or discovery.	Date.
28518	Tansley, William.....	Salisbury Centre, N. Y.....	Mills, bark.....	May 29, 1860.
27954	Tappey, William H., and N. Hoag. (See Hoag & Tappey.) Tarbell, Edmund W., assignor to self and Edwin A. Simonds.	Boston, Mass.....	Boiler, steam.....	April 17, 1860.
29447	Tarbell, Edmund W., assignor to self and E. A. Simonds..	Boston, Mass.....	Steering apparatus.....	July 31, 1860.
28699	Tate, Isaac C.....	New London, Conn.....	Faucets.....	June 12, 1860.
29729	Tatum, Joel Haywood.....	New York, N. Y.....	Candle-wick.....	Aug. 21, 1860.
28915	Tavernier, F., and F. Vouillon. (See Vouillon & Tavernier.)	Newark, N. J.....	Printing press.....	June 26, 1860.
30509	Taylor, Alva B.....	Ogdensburg, N. Y.....	Bell attachment.....	Oct. 23, 1860.
28916	Taylor, A. E.....	Chicago, Ill.....	Bonnet box.....	June 26, 1860.
30894	Taylor, C. A.....	Cleveland, Ohio.....	Water elevators.....	Dec. 11, 1860.
27247	Taylor, E. Sumner, and H. S. Larned.....	Roxbury, Mass.....	Furniture drawers, supporting.....	Feb. 21, 1860.
28617	Taylor, Henry R.....	South Dartmouth, Mass.....	Gas meters, fluid, liquids for.....	June 5, 1860.
28617	Taylor, James.....	Dixon, Ill.....	Ploughs.....	Jan. 3, 1860.
26718	Taylor, James S., et al. (See Platt & Wildman, ass'ts.)	Bridgeport, Conn.....	Bolt cutter.....	Dec. 11, 1860.
30895	Taylor, J. V.....	Philadelphia, Pa.....	Collars for horses, breast.....	Nov. 27, 1860.
30775	Taylor, J. K.....	Lamoille, Ill.....	Vehicles, clevis for attaching whiffletrees to.....	Jan. 24, 1860.
26936	Taylor, John G.....	Reading, Pa.....	Furnaces.....	May 8, 1860.
28214	Taylor, Levi S.....	Prairie City, Ill.....	Planters, corn.....	June 26, 1860.
28214	Taylor, Robert R., assignor to the Borden Town Machine Company.	Cleveland, Ohio.....	Horse shoe machine.....	April 3, 1860.
28917	Taylor, Richard, and Rensselaer Sprague.....	Fort Adams, Miss.....	Cultivators.....	Aug. 14, 1860.
27750	Taylor, Thomas Randolph.....	South Dartmouth, Mass.....	Tree protector.....	Aug. 21, 1860.
29637	Taylor, W. A., and W. W. Graves.....	Waterford, N. Y.....	Drill rest.....	June 19, 1860.
29730	Taylor, William W.....	Waterford, N. Y.....	Die stock.....	Mar. 27, 1860.
28791	Teachout, Cornelius.....	Centre Hill, Miss.....	Cotton scrapers.....	Sep. 4, 1860.
27657	Teachout, James.....	Norwich, N. Y.....	Water, apparatus for drawing.....	Nov. 27, 1860.
29924	Teague, James C.....	White Deer Mills, Pa.....	Locomotive engines, arrangement for disposing of the sparks from.....	Aug. 7, 1860.
30776	Teal, Daniel E.....	Beaver Dam, Wis.....	Sowing machines.....	Oct. 16, 1860.
29531	Teed, Lorenzo P.....	Bellefonte, Pa.....	Harrows.....	Nov. 27, 1860.
30433	Teller, D. C.....	Cambridge, Mass.....	Bedstead, sofa.....	April 10, 1860.
30789	Temple, James, assignor to Joseph Keyser.....	Cambridge, Mass.....	Bedstead, sofa.....	Aug. 28, 1860.
27871	Tendler, William H., assignor to self and John F. Moeschlin.	Brooklyn, N. Y.....	Enamelling mouldings, machine for.....	April 24, 1860.
29832	Tendler, W. H., and John F. Moeschlin.....	Philadelphia, Pa.....	Fatty matters from residuums, obtaining.....	Jan. 10, 1860.
28022	Ten Eyck, Richard, jr.....	Boston, Mass.....	Shot, chain, battery.....	July 24, 1860.
26799	Terry, Griffith P., et al. (See Patten & Terry.)	Chatfield, Minn.....	Window sash, hanging.....	Sept. 18, 1860.
29331	Thain, David, and William Jackson.....	Detroit, Mich.....	Engines, steam, regulating the exhaust of.....	June 26, 1860.
30095	Thayer, Cyrus B., assignor to Charles Robinson.....	New Orleans, La.....	Prophylactic remedies.....	Oct. 16, 1860.
28918	Thickstun, L. W.....	Rochester, N. Y.....	Washing machine.....	May 8, 1860.
30434	Thierry, James.....			
28215	Thomas, Christopher H.....			
	Thomas, Earl D.....			

20844	Thomas, Enoch, and William K. Hall.	Beverly, Va.	Hydraulic engines	Dec. 4, 1860.
28519	Thomas, John F., et al. (See Wilson & Thomas, ass'rs.)	Phillippa, Va.	Gas retorts, mode of securing lids on	May 29, 1860.
27763	Thomas, Joseph R.	Williamsburg, N. Y.	Candles, machines for moulding.	April 3, 1860.
29925	Thomas, William, assignor to self and William Webb.	New York, N. Y.	Furnaces	Sept. 4, 1860.
	Thomas, William D.	Morristown, Vt.		
	Thomas, William L., et al. (See Whitaker, Samuel H., assignor.)			
27069	Thompson, C. H., assignor to self and George Carpenter and J. S. Emery.	Orange, Mass.	Tuyere	Feb. 7, 1860.
29418	Thompson, Edwin C., and Miles B. Wheaton	New York, N. Y.	Photographic paper, box for silvering and albuminizing	July 31, 1860.
29204	Thompson, Ephraim U.	Bristol, Me.	Ship's rigging, setting up	July 17, 1860.
28113	Thompson, George W.	New York, N. Y.	Gas burners	May 1, 1860.
	Thompson, H., and K. T. Hurlbut. (See Hurlbut & Thompson.)			
1195	Thompson, Henry G., assignor to Hartford Carpet Co.	New York, N. Y.	Carpet patterns	Jan. 24, 1860.
1196	Thompson, Henry G., assignor to Hartford Carpet Co.	New York, N. Y.	Carpet patterns	Jan. 24, 1860.
1264	Thompson, Henry G., assignor to Hartford Carpet Co.	New York, N. Y.	Carpet patterns	June 19, 1860.
1265	Thompson, Henry G., assignor to Hartford Carpet Co.	New York, N. Y.	Carpet patterns	June 19, 1860.
1266	Thompson, Henry G., assignor to Hartford Carpet Co.	New York, N. Y.	Carpet patterns	June 19, 1860.
1267	Thompson, Henry G., assignor to Hartford Carpet Co.	New York, N. Y.	Carpet patterns	June 19, 1860.
1268	Thompson, Henry G., assignor to Hartford Carpet Co.	New York, N. Y.	Carpet patterns	June 19, 1860.
1269	Thompson, Henry G., assignor to Hartford Carpet Co.	New York, N. Y.	Carpet patterns	June 19, 1860.
1270	Thompson, Henry G., assignor to Hartford Carpet Co.	New York, N. Y.	Carpet patterns	June 19, 1860.
1271	Thompson, Henry G., assignor to Hartford Carpet Co.	New York, N. Y.	Carpet patterns	June 19, 1860.
1272	Thompson, Henry G., assignor to Hartford Carpet Co.	New York, N. Y.	Carpet patterns	June 19, 1860.
1273	Thompson, Henry G., assignor to Hartford Carpet Co.	New York, N. Y.	Carpet patterns	June 19, 1860.
1274	Thompson, Henry G., assignor to Hartford Carpet Co.	New York, N. Y.	Carpet patterns	June 19, 1860.
1275	Thompson, Henry G., assignor to Hartford Carpet Co.	New York, N. Y.	Carpet patterns	June 19, 1860.
1302	Thompson, Henry G., assignor to Hartford Carpet Co.	New York, N. Y.	Carpet patterns	Aug. 7, 1860.
1303	Thompson, Henry G., assignor to Hartford Carpet Co.	New York, N. Y.	Carpet patterns	Aug. 7, 1860.
1304	Thompson, Henry G., assignor to Hartford Carpet Co.	New York, N. Y.	Carpet patterns	Aug. 7, 1860.
1305	Thompson, Henry G., assignor to Hartford Carpet Co.	New York, N. Y.	Carpet patterns	Aug. 7, 1860.
1306	Thompson, Henry G., assignor to Hartford Carpet Co.	New York, N. Y.	Carpet patterns	Aug. 7, 1860.
1307	Thompson, Henry G., assignor to Hartford Carpet Co.	New York, N. Y.	Carpet patterns	Aug. 7, 1860.
1308	Thompson, Henry G., assignor to Hartford Carpet Co.	New York, N. Y.	Carpet patterns	Aug. 7, 1860.
1309	Thompson, Henry G., assignor to Hartford Carpet Co.	New York, N. Y.	Carpet patterns	Aug. 7, 1860.
1324	Thompson, Henry G., assignor to Hartford Carpet Co.	New York, N. Y.	Carpeting, &c.	Oct. 2, 1860.
1325	Thompson, Henry G., assignor to Hartford Carpet Co.	New York, N. Y.	Carpeting, &c.	Oct. 2, 1860.
1326	Thompson, Henry G., assignor to Hartford Carpet Co.	New York, N. Y.	Carpeting, &c.	Oct. 2, 1860.
1327	Thompson, Henry G., assignor to Hartford Carpet Co.	New York, N. Y.	Carpeting, &c.	Oct. 2, 1860.
1328	Thompson, Henry G., assignor to Hartford Carpet Co.	New York, N. Y.	Carpeting, &c.	Oct. 2, 1860.
1329	Thompson, Henry G., assignor to Hartford Carpet Co.	New York, N. Y.	Carpeting, &c.	Oct. 2, 1860.
1330	Thompson, Henry G., assignor to Hartford Carpet Co.	New York, N. Y.	Carpeting, &c.	Oct. 2, 1860.
1331	Thompson, Henry G., assignor to Hartford Carpet Co.	New York, N. Y.	Carpeting, &c.	Oct. 2, 1860.
1332	Thompson, Henry G., assignor to Hartford Carpet Co.	New York, N. Y.	Carpeting, &c.	Oct. 2, 1860.
1333	Thompson, Henry G., assignor to Hartford Carpet Co.	New York, N. Y.	Carpeting, &c.	Oct. 2, 1860.
1334	Thompson, Henry G., assignor to Hartford Carpet Co.	New York, N. Y.	Carpeting, &c.	Oct. 2, 1860.
1335	Thompson, Henry G., assignor to Hartford Carpet Co.	New York, N. Y.	Carpeting, &c.	Oct. 2, 1860.
28520	Thompson, John	East Boston, Mass.	Locomotive boilers	May 29, 1860.
28919	Thompson, John T.	Jackson, Tenn.	Ploughs	June 26, 1860.
30994	Thompson, Nathan, jr. (See Green, John, assignor.)	East Davenport, Iowa	Smut machines	Dec. 18, 1860.
	Thompson, Robert			

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
26300	Thompson, R. B. Thomson, James E. (See Steiner, John H., assignor) Thomson, James E., and James Martin. (See Martin, James, assignor.)	Galesburg, Ill.	Tanning.	Jan. 10, 1860
27082	Thomson, John.	Worcester, Mass.	Sewing machines.	Feb. 7, 1860.
27936	Thomson, William.	Detroit, Mich.	Forge bellows.	April 17, 1860.
29419	Thomson, William.	Buffalo, N. Y.	Brush, nail.	July 31, 1860.
30435	Thorn, Joseph. Thornberry, William, <i>et al.</i> (See Hunter, Charles H., assignor.)	Courtland, Ala.	Cotton cleaners.	Oct. 16, 1860.
28819	Thorp, David H., assignor to the Boston Faucet Co.	Chelsea, Mass.	Faucets.	June 19, 1860.
28114	Thorp, James P.	Plantville, Conn.	Shackle, wagon shaft.	May 1, 1860.
29205	Thorp, S., and William D. Shurtleff.	Turner, Me.	Car coupling, railroad.	July 17, 1860.
27484	Thorp, Thomas.	New York, N. Y.	Cigar heading socket.	Mar. 13, 1860.
28115	Thorp, Thomas.	New York, N. Y.	Cigars, machine for making.	May 1, 1860.
29638	Threlkeld, A.	Boone County, Ind.	Washing machine.	Aug. 14, 1860.
30777	Thurber, Charles.	Brooklyn, N. Y.	Calligraphs.	Nov. 27, 1860.
30011	Tibbets, Alpheus C. Tibbets & McCoun. (See Vedder, N. S., assignor.)	Rockland, Me.	Sails of vessels, fore and aft.	Sept. 11, 1860.
28640	Tiebout, John, assignor to self and William Tiebout.	Brooklyn, N. Y.	Bung cutter.	June 5, 1860.
29332	Tiebout, John.	Brooklyn, N. Y.	Buckles.	July 24, 1860.
27580	{ Tiffany, D. B., and S. W. Soule. Tiffany, Ell, assignor to self and George Cooper Tiffany, Joel. Tiffany & Wethered, <i>et al.</i> (See Gove, Andrew I.) Tift, Albert C. (See Carpenter, Charles B.)	Xenia, Ohio. Milwaukee, Wis. Thompsonville, Conn. Syracuse, N. Y.	Printing addresses on newspapers, &c., machinery for. Knitting machines. Hulling cotton seed, machines for.	Mar. 20, 1860. May 1, 1860. Sept. 18, 1860.
28315	Tilghman, Richard A.	Philadelphia, Pa.	Decomposing fats into fatty acids and glycerine, method of.	May 15, 1860.
27638	Tillman, Samuel A.	New York, N. Y.	Pavements, mode of making.	Mar. 27, 1860.
28316	{ Tilton, Jeremiah, and Edwin Ritson. Tilton, Jeremiah C. Tilton, Warren. (See Turner, Joshua, assignor.)	Northfield, N. H. Sanbornton, N. H. Sanbornton Bridge, N. H.	Flock, machinery for cutting. Temples.	May 15, 1860. Dec. 11, 1860.
28116	Timmerman, G. H.	St. Louis, Mo.	Valves, governor.	May 1, 1860.
30897	Tinkham, Benjamin. Tinsley, A. H., <i>et al.</i> (See Watson, C., assignor.)	Cameron, Ill. New York, N. Y.	Cultivators. Trap, animal.	Dec. 11, 1860. Feb. 7, 1860.
27083	Tinsley, William.	Baltimore County, Md.	Harvesting machines.	June 5, 1860.
28618	Titcomb, Benaiah.	Brooklyn, N. Y.	Medicated pads.	Jan. 3, 1860.
20719	Titus, William D. Toble, Stuber & Frank. (See Stuber, Frank & Tobie.) Todd, E. (See Brockett, Todd & Brockett.) Todd, Paul P. (See Bradbury, Charles J., assignor.)			
28920	Toggenberger, F.	Chicago, Ill.	Sewing machines.	June 26, 1860.
28021	Tolhurst, George W.	Liverpool, Ohio.	Washing machine.	April 24, 1860.
28216	Tolhurst, George W., and Dantel C. Sartwell.	Liverpool, Ohio.	Wagon, dumping.	May 8, 1860.

29114	Tolman, Sewell P., and Nathaniel F. Blodgett. Tompkins, Stephenson & Leland. (See Leland, E. A., assignor.)	North Orange, Mass.	Tuyeres.	July 3, 1860.
29018	Tompert, Phillip, and John Coyle. Tompkins, Charles R., et al. (See Gelston, Johnson & Tompkins.)	Louisville, Ky.	Fats, apparatus for rendering	July 3, 1860.
1338	Tompkins, Daniel F., et al. (See Johnson, Frank G., assignor.)			
30168	Tompkins, Daniel F., et al. (See Lindsley, Isaac, assignor.)			
28700	Tompkins, Elias.	Brooklyn, N. Y.	Heater fronts	Oct. 9, 1860.
27084	Topham, Samuel E.	Newark, N. J.	Saddle trees	Sept. 25, 1860.
29019	Topham, James S.	Washington, D. C.	Hame tug and buckle	June 12, 1860.
26867	Torrence, Phineas.	Newark, N. J.	Indicator, price	Feb. 7, 1860.
30436	Torrey, A. P.	Oxford, Ga.	Felling trees, machine for	July 3, 1860.
26937	Torrey, Edward P.	Jersey City, N. J.	Freezers, ice cream	Jan. 17, 1860.
29926	Tourne, J. Eugene.	New Orleans, La.	Drying chambers	Oct. 16, 1860.
30266	Tower, Reuben and George E.	Ashtabula, Ohio	Gauge, water	Jan. 24, 1860.
28521	Towers, William H.	New York, N. Y.	Broom	Sept. 4, 1860.
26801	Towndrow, Thomas	New York, N. Y.	Inkstand	Oct. 2, 1860.
	Towne, Lauriston	New York, N. Y.	Bookbinding	May 29, 1860.
	Towne, William J., et al. (See Magee, John, assignor.)	Providence, R. I.	Metal, sheet, making chain from	Jan. 10, 1860.
27085	Townsend, Daniel, as trustee. (See Wiard, Norman, ass'r.)			
	Townsend, Elmer.			
	Townsend, Elmer, et al. (See Stetson, Bradford, ass'r.)			
	Townsend, E., and William Wells. (See Wells, Parker, assignor.)			
29329	Townsend, James, and Daniel Montague. (See Montague & Townsend.)	Boston, Mass.	Pegging machines	Feb. 7, 1860.
	Towsley, Louis D., and	New York, N. Y.		
	E. Matteson.	Brooklyn, N. Y.	Motive power	July 24, 1860.
28921	Toye, Watson & Hardiker. (See Watson, Hardiker & Toyce.)			
30012	Tracy, Albert.	United States Army.	Furniture, folding	June 26, 1860.
30510	Tracy, Dwight.	Worcester, Mass.	Sewing machines	Sept. 11, 1860.
28701	Tracy, J. D.	Springfield, Mass.	Bridle bits, attachment for	Oct. 23, 1860.
28522	Trapp, William	Elmira, N. Y.	Stave machine	June 12, 1860.
30013	Treadwell, John G.	Albany, N. Y.	Stoves	May 29, 1860.
30097	Treadwell, John G.	Albany, N. Y.	Ranges and stoves	Sept. 11, 1860.
37025	Treadwell, William B.	Albany, N. Y.	Stoves	Sept. 18, 1860.
27171	Treutler, Benedict, assignor to self and Samuel W. Weiss.	Dale, Pa.	Process of manufacturing steel	Jan. 31, 1860.
28922	Trimmer, B. T.	Rochester, N. Y.	Separators, grain	Feb. 14, 1860.
30995	Trinks, Gregor.	Jersey City, N. J.	Curtain slide, window	June 26, 1860.
27937	Tripp, D. B.	Moravia, N. Y.	Millstones, device for grinding diamonds for	Dec. 18, 1860.
28419	Tripp, James S.	Danby, N. Y.	Saw filer	April 17, 1860.
28333	Tripler, William K.	Lima, Ind.	Fruit and vegetable cutter	May 22, 1860.
28420	Trittin, Emil, assignor to self and J. A. Cummings.	Philadelphia, Pa.	Lamps, burners for vapor	May 15, 1860.
28023	Trotter, Jonathan T., and Isaac F. Williams	New York, N. Y.	India rubber goods, finishing the surface of	May 22, 1860.
26720	Trott, Thomas P.	Washington, D. C.	Labels for mail bags, &c	April 24, 1860.
26721	Trotter, Jonathan T.	New York, N. Y.	Rubber goods, felt, finishing	Jan. 3, 1860.
29333	Trowbridge, S. T.	Decatur, Ill.	Canes for physicians	Jan. 3, 1860.
	Truax, Jacob W.	Richford, Vt.	Water wheels	July 24, 1860.

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
29845	Truax, Jacob W., assignor to self and O. J. Smith.	Richford, Vt.	Saw mills, head block for	Aug. 28, 1860.
30098	True, Mark B.	Newburyport, Mass.	Excavating machine	Sept. 18, 1860.
29020	Trumbull, Horace.	Jersey City, N. J.	Glass, manufacture of	July 3, 1860.
30596	Trumpore, George D.	Newark, N. J.	Clothes squeezer.	Nov. 6, 1860.
29731	Truss, Thomas Leaville.	Darlington, England.	Pipes, construction and joining of.	Aug. 21, 1860.
26868	Tucker, Hiram	Cambridgeport, Mass.	Roof covering, portable.	Jan. 17, 1860.
26722	Tucker, James.	Washington, D. C.	Cables, chain, stoppers for.	Jan. 3, 1860.
27321	Tucker, Joseph C.	New York, N. Y.	Saccharine juices, defecating and decolorizing	Feb. 28, 1860.
27485	Tufts, Augustus.	Malden, Mass.	Lanterns	Mar. 13, 1860.
29639	Tufts, Nathaniel, jr.	Boston, Mass.	Gas meters	Aug. 14, 1860.
28421	Tupper, A. K.	Millford, Mich.	Gas, apparatus for generating.	May 22, 1860.
30845	Tupper, Horace.	Buffalo, N. Y.	Railroad switch.	Dec. 4, 1860.
30940	Tupper, Horace.	Buffalo, N. Y.	Railroads, street, turnouts for.	Dec. 18, 1860.
30099	Tunison, John F.	Buffalo, N. Y.	Grain cleaning machines.	Sept. 18, 1860.
27938	Turnbull, W. C.	Baltimore, Md.	Air engines, compressed.	April 17, 1860.
27486	Turner, Enoch B.	Providence, R. I.	Cars, railroad, brakes for.	Mar. 13, 1860.
28117	Turner, Grant B.	Cuyahoga, Ohio.	Smut machines.	May 1, 1860.
29732	Turner, Greenleaf L.	New York, N. Y.	Car springs, railroad	Aug. 21, 1860.
28641	Turner, Joshua, assignor to self, F. Guild, E. C. Daniell, and Warren Covell.	Cambridgeport, Mass.	Leather, machine for buffing and reducing.	June 5, 1860.
28946	Turner, Joshua, assignor to self and F. Guild.	Cambridgeport, Mass.	Plane iron sharpeners.	June 26, 1860.
26957	Turner, Joshua, assignor to self, J. T. Bartlett, and E. E. Butman.	Cambridgeport, Mass.	Glue pot	Jan. 24, 1860.
29446	Turner, Joshua, assignor to self, Calvin P. Hinds, and Warren Tilton.	Cambridgeport, Mass.	Oil feeder.	July 31, 1860.
28945	Turner, Josiah, and Thomas P. Smith, assignors to themselves and Edmund Burke.	Lunapee, N. H.	Cultivator teeth.	June 26, 1860.
28217	Turner, J. B.	Jacksonville, Ill.	Seeding machines.	May 8, 1860.
30553	Turner, Sidney S., assignor to self and Otis F. Vinton.	Westborough, Mass.	Leather, machine for splitting	Oct. 30, 1860.
28422	Tusch, William	Brooklyn, N. Y.	Brushes	May 22, 1860.
28423	Tustin, William I.	Benicia, Cal.	Windmills.	May 22, 1860.
	Tuttle, William A., and Barton H. Jenks. (See Jenks & Tuttle.)			
28424	Twining, A. T., Ebenezer Wood, and William Elderhorst.	Louisburg, N. Y.	Cans, preserve.	May 22, 1860.
29640	Twining, Isaac C.	Troy, N. Y.	Harvesters, automatic rakes for.	Aug. 14, 1860.
29328	Tyler, Charles N., et al. (See Sweeny, Arthur W., ass'r.)	Wrightstown, Pa.	Gas generators and burners.	July 24, 1860.
30651	Tyler, Charles N.	Washington, D. C.	Harvesters.	Nov. 13, 1860.
30014	Tyler, Samuel W.	Greenwich, N. Y.	Railroad joints.	Sept. 11, 1860.
30267	Tyng, Levi B.	Lowell, Mass.	Bed bottom.	Oct. 2, 1860.
	Ulmer, Philip.	Charlestown, Mass.		
27581	Ulrich, D. A., et al. (See Keffer, Peter, assignor.)	Tremont, Pa.	Coal breaker.	Mar. 20, 1860.
29115	Umboltz, Philip	Baton Rouge, La.	Sugar, apparatus for draining.	July 10, 1860.
30029	Unbehagen, J. J.	New York, N. Y.	Shirting, evening the edges of	Sept. 11, 1860.

28426	Underhill, R. L.	Bath, N. Y.	Latch, door.	May 22, 1860
	United States Pin Company. (See Fowler, T., and De Grasse, assignors.)			
28024	Underkoffler, Jonas.	Philadelphia, Pa.	Truck, hand.	April 24, 1860.
27846	Underwood, Henry.	New York, N. Y.	Belting.	April 10, 1860.
30169	Underwood, John.	Cameron, Ill.	Planter, corn.	Sept. 25, 1860.
	Updike, Lyman, and J. M. Hosner. (See Cleveland, N. B., assignor.)			
29833	Upham, James P., et al. (See Colby, Daniel C., ass't.)	Norwich, Conn.	Steam trap.	Aug. 28, 1860.
	Upham, Nehemiah.			
27602	Upson, I. T., et al. (See Crooker, Erastus, assignor.)	Philadelphia, Pa.	Clay pipe machines.	Mar. 20, 1860.
27487	Urner, Arnold & Price. (See Arnold, Price & Urner.)	Leicester, N. Y.	Straw cutters.	Mar. 13, 1860.
29532	Ustick, Stephen, assignor to self and Julius A. Pease.	Chapel Hill, N. C.	Book and paper, machine for trimming.	Aug. 7, 1860.
27395	Utley, David, 2d, and Pell Teed.	Chapel Hill, N. C.	Cars, carriages, &c., head rest for travellers in railroads.	Mar. 6, 1860.
	Utley, Gabriel.			
	Utley, Grey.			
29420	Vail, Thomas J. (See Jacobs, H. M., assignor.)	Industry, Ill.	Seeding machines.	July 31, 1860.
29334	Vail, David J.	Miami City, Ohio.	Boilers, steam.	July 24, 1860.
	Vaile, Jonathan.			
29021	Valentine, Louis T. (See Karcheski, Xavier, assignor.)	Providence, R. I.	Washing machine.	July 3, 1860.
29641	Vallett, Silas T.	Poughkeepsie, N. Y.	Files, machine for cutting.	Aug. 14, 1860.
29421	Van Anden, William.	New York, N. Y.	Lamps, vapor.	July 31, 1860.
27506	Van Bunschoten, Isaac.	Yreka, Cal.	Telegraphing, electric.	Mar. 13, 1860.
27655	Van Choate, S. F.	Yreka, Cal.	Telegraph, magnetic printing.	Mar. 27, 1860.
	Vancuren, James, and A. Hays. (See Hays & Vancuren.)			
29335	Vandegrift, Andrew J.	St. Louis, Mo.	Grain separator.	July 24, 1860.
28541	Vanderburgh, George E., assignor to the Liquid Quartz Company of New York.	Manaroneck, N. Y.	Cements, silicated.	May 29, 1860.
28540	Vanderburgh, George E., assignor to the Liquid Quartz Company.	Manaroneck, N. Y.	Preparation of soluble silicates.	May 29, 1860.
29206	Vandercok, Henry D.	Marshall, Mich.	Clap boarding gauge.	July 17, 1860.
29642	Van Deren, G. W.	Big Flats, N. Y.	Engines, steam.	Aug. 14, 1860.
30365	Van Deren, George W.	Big Flats, N. Y.	Valve for steam engines.	Oct. 9, 1860.
	Van Deursen, R. D. (See Ira B. Gibbs, assignor.)			
30778	Van Deusen, J. B.	New York, N. Y.	Sounding apparatus.	Nov. 27, 1860.
27172	Van Doren, Francis.	Adrian, Mich.	Planters, hand seed.	Feb. 14, 1860.
28025	Vandyke, Augustus C.	Greensburg, Ky.	Ore, apparatus for heating.	Apr. 24, 1860.
27582	Van Gelder, T. R.	Damascus, Pa.	Mills, grist, collecting toll from.	Mar. 20, 1860.
30268	Van Hoesen, Pierre D.	New York, N. Y.	Wrench, wagon.	Oct. 2, 1860.
30898	Van Hoesen, Pierre D.	New York, N. Y.	Washing machine.	Dec. 11, 1860.
28523	Van Horne, R. P.	Gratiot, Ohio.	Cultivators.	May 29, 1860.
29022	Van Houten, Isaac W.	Philadelphia, Pa.	Car coupling.	July 3, 1860.
29220	Vankirk, J. T., assignor to C. A. Vankirk & Co.	Philadelphia, Pa.	Ice pick.	July 17, 1860.
29221	Vankirk, J. T., assignor to C. A. Vankirk & Co.	Philadelphia, Pa.	Lamps.	July 17, 1860.
27583	Van Kleck, David.	Cohocton, N. Y.	Harvesters.	Mar. 20, 1860.
	Van Name, et al. (See Hinds, Petre, assignor.)			
29023	Van Oeckelen, Cornelius J.	New York, N. Y.	Melodeons.	July 3, 1860.
28792	Vansant, Isaac Leru.	Red Lion, Del.	Carriage seats, adjustable.	June 19, 1860.
28218	Van Valkenburgh, Alexander.	Griffin's Corners, N. Y.	Ox shoes.	May 8, 1860.
29733	Van Valkenburgh, James.	Binghampton, N. Y.	Cleaning rice, machine for.	Aug. 21, 1860.
28219	Van Vleck, George H.	Buffalo, N. Y.	Churn.	May 8, 1860.
30706	Van Vleck, V., assignor to self and R. Lockwood.	Buffalo, N. Y.	Dental chairs.	Nov. 20, 1860.

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
26338	Van Wornier, Jasper	Albany, N. Y.	Stoves.	Jan. 24, 1860.
27603	Van Wyck, C. J., assignor to John M. Macauley	New York, N. Y.	Distilling oil from coal, apparatus for.	Mar. 20, 1860.
27847	Vasquez, C. L., assignor to R. H. Gratz.	Philadelphia, Pa.	Gas meters, dry.	April 10, 1860.
27396	Vaughan, Aaron C.	Johnstown, Pa.	Churn dasher.	Mar. 6, 1860.
27397	Vaughan, Aaron C.	Rainsburg, Pa.	Mortising machine.	Mar. 6, 1860.
28444	Vaughan, Joseph J., assignor to self and S. R. Shinn.	Alexandria, Mich.	Car couplings.	May 22, 1860.
27322	Vaughan, Silas O.	De Kalb, Ill.	Ploughs.	Feb. 28, 1860.
28026	Vaughn, James A.	Cuyahoga Falls, Ohio.	Separators, grain.	April 24, 1860.
30273	Vaux, Calvert, and L. W. Leeds. (See Leeds & Vaux.) Veatch, John A.	San Francisco, Cal.	Gold separator.	Oct. 2, 1860.
1186	Vedder, N. S., assignor to Potter & Co.	Troy, N. Y.	Stoves, slide plates of. (Design)	Jan. 3, 1860.
1187	Vedder, N. S., assignor to Potter & Co.	Troy, N. Y.	Stoves, doors of cook's. (Design)	Jan. 3, 1860.
1184	Vedder, N. S., and A. Murray, assignors to Potter & Co.	Troy, N. Y.	Stoves, doors of cook's. (Design)	Jan. 3, 1860.
1185	Vedder, N. S., and Ezra Ripley, assignors to Potter & Co.	Troy, N. Y.	Stoves, side plates of box. (Design)	Jan. 3, 1860.
1201	Vedder, N. S.	Troy, N. Y.	Stove, parlor and cook's. (Design)	Feb. 14, 1860.
1202	Vedder, N. S.	Troy, N. Y.	Stoves, parlor. (Design)	Feb. 14, 1860.
1204	Vedder, N. S., assignor to Abraham and Joseph Cox and John Whiteman.	Troy, N. Y.	Stove, cooking. (Design)	Feb. 21, 1860.
27398	Vedder, Nicholas S.	Troy, N. Y.	Stoves, cooking.	Mar. 6, 1860.
1235	Vedder, Nicholas S., assignor to Sherman S. Jewett & F. H. Root.	Troy, N. Y.	Stoves. (Design)	April 24, 1860.
1255	Vedder, N. S., assignor to Tibbitts & McCoun. Vedder, N. S., and A. K. Saunders. (See Saunders & Vedder.)	Troy, N. Y.	Stove, cook's. (Design)	June 12, 1860.
1294	Vedder, Nicholas S., assignor to Tibbitts & McCoun.	Troy, N. Y.	Stove, cook's. (Design)	July 31, 1860.
1312	Vedder, N. S., assignor to North, Chase & North.	Troy, N. Y.	Stoves. (Design)	Sept. 4, 1860.
1336	Vedder, N. S., assignor to John S. and Merritt Peckham.	Troy, N. Y.	Stove register. (Design)	Oct. 2, 1860.
1339	Vedder, N. S., assignor to Hicks, Wolfe & Co.	Troy, N. Y.	Stove, parlor cooking. (Design)	Nov. 13, 1860.
1346	Vedder, N. S., assignor to Hicks, Wolfe & Co.	Troy, N. Y.	Stove plates, cook's. (Design)	Nov. 13, 1860.
1364	Vedder, N. S., and Ezra Ripley, assignors to Potter & Co.	Troy, N. Y.	Plates, stove. (Design)	Dec. 18, 1860.
1365	Vedder, N. S., and William L. Sanderson, assignors to Potter & Co.	Troy, N. Y.	Plate, stove. (Design)	Dec. 18, 1860.
28923	Vellie, Henry C.	Poughkeepsie, N. Y.	Mills.	June 26, 1860.
28317	Vergnes, Maurice.	New York, N. Y.	Gas batteries, construction of voltaic.	May 15, 1860.
30271	Vergnes, Maurice.	New York, N. Y.	Electro-magnetic helix.	Oct. 2, 1860.
30272	Vergnes, Maurice.	New York, N. Y.	Electro-magnetic engines.	Oct. 2, 1860.
27173	Vertrees, E. L.	Howe's Valley, Ky.	Boot vamps, mode of cutting.	Feb. 14, 1860.
27323	Vertrees, William A.	Winchester, Mo.	Harvesters.	Feb. 28, 1860.
28220	Victory, Edmund.	Watertown, N. Y.	Yarns, machinery for spinning.	May 8, 1860.
28702	Villet, Collignon, Joseph, and Louis George. Vinton, Otis F., et al. (See Turner, Sidney S., assignor.)	Paris, France.	Typography.	June 12, 1860.
28793	Vion, Hippolyte, Charles.	Paris, France.	Electricity, atmospheric, method of utilizing.	June 19, 1860.

1236	Violet, Jean Baptiste, assignor to John W. Hoyt.	New York, N. Y.	Cloth, floor, oil.	(Design)	April 24, 1860.
20846	Vittum, Francis J.	Chelsea, Mass.	Boots and shoes, hand machine for pegging.	(Design)	Dec. 4, 1860.
1203	Volk, Leonard W.	Chicago, Ill.	Statuette of Stephen A. Douglas.	(Design)	Feb. 14, 1860.
1250	Volk, Leonard W.	Chicago, Ill.	Bust of Abraham Lincoln.	(Design)	June 12, 1860.
27248	Von Auw, Iwan. (See Liebenroth, Adolphus, assignor.)	Hancock, Md.	Lamps.		Feb. 21, 1860.
27014	Von Bonhorst, Charles.	Paris, France.	Yarn.		Jan. 31, 1860.
28426	Voutlon, Francis, and Ferdinand Tavernier.	Grand Rapids, Mich.	Tire, shortening.		May 22, 1860.
26723	Vorhees, Abraham.	New York, N. Y.	Car springs.		Jan. 3, 1860.
28619	Vose, Richard.	New York, N. Y.	Car springs.		June 5, 1860.
28703	Vose, Richard.	New York, N. Y.	Car springs.		June 12, 1860.
27174	Vose, J. H., et al. (See Kinzler, C., assignor.)	New York, N. Y.	Car springs.		June 12, 1860.
28620	Vowles, Joseph.	New Hudson, Mich.	Cultivators.		Feb. 14, 1860.
28704	Waddell, L. & W. H.	Staunton, Va.	Car couplings.		June 5, 1860.
28927	Wade, Edward.	Norwich, Conn.	Pumps.		June 12, 1860.
30600	Wade, Nicholas K., and Joseph Kaye.	Pittsburgh, Pa.	Car wheels.		Sept. 4, 1860.
28794	Wadsworth, David, jr.	Nashua, N. H.	Hinge, gate.		Nov. 6, 1860.
26941	Wadsworth, H. Nichols.	Washington, D. C.	Tooth brush.		June 19, 1860.
	Wadsworth, John A.	Providence, R. I.	Pessaries, elastic.		Jan. 24, 1860.
29734	Waffle, C. L.	Sharon, Ohio.	Planters, corn.		Aug. 21, 1860.
28118	Wagener, David S.	Penn Yan, N. Y.	Threshing machines.		May 1, 1860.
28427	Wagener, Jephtha A.	Pultney, N. Y.	Harvesting machines.		May 22, 1860.
29422	Wagner, Ausbent H.	Staunton, N. Y.	Mills.		July 31, 1860.
28524	Wagner, J. H. G. D.	Paris, France.	Filtering apparatus.		May 29, 1860.
27660	Wailey, C. W.	Lexington, Ky.	Ties, iron, for cotton bales.		Mar. 27, 1860.
28813	Wait, John H.	Portsmouth, Ohio.	Movement, mechanical.		May 15, 1860.
	Waitt, G. W., et al. (See Webber, Elbridge, ass'tr.)				
27488	Walch, John.	New York, N. Y.	Stoves.		Mar. 13, 1860.
27872	Walcott, Freeman, assignor to self and F. J. Coffin.	Milford, Mass.	Roofing board.		April 10, 1860.
27501	Walcott, Halsey D., assignor to Martin L. Bradford & Co.	Boston, Mass.	Scissors and nippers.		Mar. 13, 1860.
27674	Walcott, H. D., assignor to H. Williams.	Boston, Mass.	Eyelet machines.		Mar. 27, 1860.
27489	Waldo, A. T.	Dryden, N. Y.	Grain cleaners.		Mar. 13, 1860.
	Waldron, S. W., et al. (See Jones, John B., assignor.)				
27584	Walker, George.	Springville, N. Y.	Washing machine.		Mar. 20, 1860.
28924	Walker, George.	Philadelphia, Pa.	Lamps, vapor.		June 28, 1860.
28796	Walker, H. M.	Watertown, Conn.	Vehicles, two-wheeled, connecting shafts to.		June 19, 1860.
29847	Walker, Sylvanus, assignor to self and S. S. Hemenway.	Boston, Mass.	Trace fastener.		Aug. 28, 1860.
26958	Walker, Sylvanus, assignor to William P. Spence.	Boston, Mass.	Egg beater.		Jan. 24, 1860.
27026	Walker, Sylvanus, assignor to W. P. Spence and J. F. Adams.	Boston, Mass.	Table leaf supporter.		Jan. 31, 1860.
27585	Walker, Sylvanus, assignor to self and Sidney S. Hemenway.	Boston, Mass.	Bedsteads.		Mar. 20, 1860.
30380	Walker, Sylvanus, assignor to self and Sidney S. Hemenway.	Boston, Mass.	Fastener, sash.		Oct. 9, 1860.
	Walker, William, and S. A. Worthen. (See Worthen, S. A., assignor.)				
27325	Walker, William D.	Livonia, N. Y.	Wind wheels, method of regulating.		Feb. 28, 1860.
27604	Wall, A. L. O., George Roberts, and Milo S. Carter.	Decatur, Ill.	Ploughs, mole, truck for.		Mar. 20, 1860.
27751	Wall, A. L. O., George Roberts, and Milo S. Carter.	Decatur, Ill.	Ploughs, mole.		April 3, 1860.
30015	Wall, A. L. O., George Roberts, and M. S. Carter.	Decatur, Ill.	Ploughs, mole, portable capstan for.		Sept. 11, 1860.
28621	Wall, Thomas.	Jones' Station, Ohio.	Bedstead.		June 5, 1860.

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
29024	Wallace & Sons, <i>et al.</i> (See De Forrest, Thomas B., ass'r.)	Cameron, Ill.	Fences, portable.	July 3, 1860.
29834	Wallace, William M.	Americus, Ga.	Brick machines.	Aug. 28, 1860.
30186	Wallace, William S.	New York, N. Y.	Gun carriage.	Sept. 25, 1860.
29959	Walsh, John J., assignor to self, Thomas L. Braynard, and H. C. Adams.	Newark, N. J.	Locks for carpet bags.	Jan. 24, 1860.
30016	Walsh, Zachariah, assignor to C. Walsh.	Brooklyn, N. Y.	Latch, door.	Sept. 11, 1860.
29795	Walter, Conrad, and A. Friedrich. (See Friedrich & Walter.)	Boston, Mass.	Steam trap.	June 19, 1860.
27399	Walton, Jonathan.	Loudon County, Va.	Fire-arms, breech loading.	Mar. 6, 1860.
29423	Wampler, J. M.	Memphis, Tenn.	Roofing, belting, &c., fabric for.	July 31, 1860.
29423	Wandel, Haram, <i>et al.</i> (See Louis, Peter, assignor.)			
29423	Wands, John B.			
29423	Wannmaker, J. S., & Co. (See Acker, Abram, assignor.)			
29423	Wansbraugh, H., and William Johnson. (See Johnson & Wansbraugh.)			
29526	Wappich, Maximilian.	Sacramento, Cal.	Water elevator.	May 29, 1860.
29928	Wappich, Maximilian.	Sacramento, Cal.	Presses.	Sept. 4, 1860.
27848	Warburton, William F., and C. E. Lovett.	Philadelphia, Pa.	Hats, manufacture of.	April 10, 1860.
30900	Warburton, William F.	Philadelphia, Pa.	Hats, ventilated.	Dec. 11, 1860.
30941	Ward, A., and F. H. Naylor. (See Naylor & Ward.)	Mansfield, Ohio.	Churn.	Dec. 18, 1860.
27175	Ward, D. T.	New York, N. Y.	Churn.	Feb. 14, 1860.
28319	Ward, Edwin.			
30949	Ward, John, jr., <i>et al.</i> (See Johnson, Josec, assignor.)	Lake Village, N. H.	Swift.	May 15, 1860.
26802	Wardwell, C. P. S.	Lake Village, N. H.	Comb cleaner.	Dec. 18, 1860.
29835	Wardwell, C. P. S., assignor to Samuel H. Doten.	Barnston, Canada.	Stone dressing machine.	Jan. 10, 1860.
30366	Ware, Abel.	Athens, Maine.	Surveyor's instrument.	Aug. 28, 1860.
29424	Warne, M. W.	St. Louis, Mo.	Filters.	Oct. 9, 1860.
27873	Warner, Chapman.	Brooklyn, N. Y.	Pumps.	July 31, 1860.
29425	Warner, Charles H., ass'r to the Brooklyn Flint Glass Co.	Brooklyn, N. Y.	Glass moulds.	April 10, 1860.
29207	Warner, Frederick W.	East Haddam, Conn.	Mowing machines.	July 31, 1860.
29735	Warner, Jonathan, and Thomas C. Stillman.	Chester, Conn.	Yokes, ox, fastening pins in the bows of.	July 17, 1860.
30437	Warner, Miller.	West Middleburgh, Ohio.	Planters, seed.	Aug. 21, 1860.
30779	Warner, Nathan S., and Henry S. Benedict.	Bridgeport, Conn.	Ladle with fork attached.	Oct. 16, 1860.
29822	Warner, Smith R.	London, Ohio.	Seeding machines.	Nov. 27, 1860.
29825	Warren, Alonzo, and E. Damon, jr.	Boston, Mass.	Wheels, turbine, hanging.	June 5, 1860.
28797	Warren, Alonzo, and E. Damon, jr.	Boston, Mass.	Dynamometers.	June 26, 1860.
28797	Warren, A. F.	Brooklyn, N. Y.	Pen holder.	June 19, 1860.
28926	Warren Chemical and Manufacturing Company, <i>et al.</i> (See Callender, M. L., assignor.)	Gettysburgh, Pa.	Planters, seed.	June 26, 1860.
28926	Warren, David.			
28926	Warren, Fuller & Co. (See Hathaway, David, assignor.)			
28926	Warren, Grant & Co., <i>et al.</i> (See Jordan & Eustice, assignors.)			

30859	Warren, Henry, assignor to Henry Beebe	Hoboken, N. J.	Scraper and brush, foot	Dec. 4, 1860.
29426	Warren, Jonathan	Brooklyn, N. Y.	Pen holder	July 31, 1860.
30270	Warren, Jonathan	Brooklyn, N. Y.	Pen cleaner	Oct. 2, 1860.
27586	Warren, Reuben	Jefferson, Ohio	Boot crimping machine	Mar. 20, 1860.
28221	Warren, Sanford, Harroun & Hill. (See Hebard, Hill & Rockwell, assignors.)	Brooklyn, N. Y.	Hose coupling	May 8, 1860.
28428	Warren, Sylvester W.	New York, N. Y.	Caoutchouc, apparatus for vulcanizing	May 22, 1860.
30170	Warren, Walter	Penn Yan, N. Y.	Ploughs	Sept. 25, 1860.
28525	Warth, Albin	New York, N. Y.	Fire escape	May 29, 1860.
27249	Washburn, A. A.	St. Johnsville, N. Y.	Washing machine	Feb. 21, 1860.
30031	Washburn, Theodore S., assignor to Ezra B. Booth	Rochester, N. Y.	Sewing machines	Sept. 11, 1860.
27400	Wassell, William, and E. H. Dierker. (See Sloan, John, assignor.)			
27400	Waterbury Button Company. (See Maltby, Douglass F., assignor.)			
27587	Waterman, Henry	Haverhill, Mass.	Water, apparatus for hoisting	Mar. 6, 1860.
27324	Watson, Alex. T.	Castleton, N. Y.	Car springs, railroad	Mar. 20, 1860.
30280	Watson, Augustus	London, Ohio	Drains with cement, lining underground	Feb. 28, 1860.
30274	Watson, C., assignor to self and A. H. Tinsley	Cascade, Va.	Harrows	Oct. 2, 1860.
30438	Watson, John F., et al. (See Yost, G. W. N., assignor.)	Buffalo, N. Y.	Water wheel	Oct. 2, 1860.
30523	Watson, John J.	Buffalo, N. Y.	Churn dasher	Oct. 16, 1860.
30901	Watson, John J., assignor to self and Solon Dike	Buffalo, N. Y.	Saws, reciprocating, method of adjusting the rake of	Oct. 23, 1860.
30996	Watson, John J., William Hardiker, and Thomas Toye	Buffalo, N. Y.	Pipes, gas and water, tapping	Dec. 11, 1860.
27490	Watson, Stephen V. R. (See Gould, T. P.)	Buffalo, N. Y.	Ventilating and warming railroad cars, apparatus for	Dec. 18, 1860.
28705	Watson, William	Bishopville, S. C.	Ploughs	Mar. 13, 1860.
29427	Wattles, Luther R.	Lowell, Ill.	Stock, neck	June 12, 1860.
30847	Watts, Alfred J.	Newton, Mass.	Looms	July 31, 1860.
30549	Watts, William	Utica, N. Y.	Dentists' crystalline gold, manufacture of	Dec. 4, 1860.
28027	Waugh, John	Newark, N. J.	Shafting, hangers and boxes for	Oct. 30, 1860.
29533	Ways, David F. S.	Elmira, N. Y.	Metal, sheet, machine for cutting	April 24, 1860.
27661	Weakly, Edward B.	Baltimore, Md.	Lightning arresters for telegraphs	Aug. 7, 1860.
23542	Weathered, Thomas W., et al. (See Cherevoy, Edmund B., assignor.)	Pana, Ill.	Seeding machines	Mar. 27, 1860.
27176	Webb, William, and William Thomas. (See Thomas, William, assignor.)	Gardiner, Maine	Propellers, marine	May 29, 1860.
30511	Webber, Elbridge, assignor to self, G. W. Waltt, and N. B. and G. H. Starbuck.	Hartford, Conn.	Gridirons	Feb. 14, 1860.
28119	Webster, Edward	Portsmouth, Va.	Boilers, steam, prevention of incrustation of	Oct. 23, 1860.
27177	Webster, H. L., & Co. (See Ladd, Samuel J., assignor.)			
30649	Webster, Nathan B., and Robert W. Young	Foxville, Va.	Grain cleaners	May 1, 1860.
28429	Webster, William, and F. E. Darrow. (See Seymour, Henry A., assignor.)	Gowanda, N. Y.	Tanning	Feb. 14, 1860.
30650	Webster, William B.	Philadelphia, Pa.	Pictures, preparation of transparent	Nov. 13, 1860.
27326	Webster, W. R.	Muscantine, Iowa	Presses, power	May 22, 1860.
28429	Wedekind, Gustar	New London, Conn.	Harness saddle	Nov. 13, 1860.
27326	Weed, Clay, Danford & Gray. (See Gray, John, assignor.)	New York, N. Y.	Veneers, machine for cutting	Feb. 28, 1860.
28429	Weed, James			
30650	Weeks, Thomas J.			
27326	Weiler, Peter			

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
27752	Weimer, Peter L.....	Lebanon, Pa.....	Valves of steam engines, governor.....	April 3, 1860.
27939	Weimer, Peter L.....	Lebanon, Pa.....	Valves of steam engines, mode of actuating governor.....	April 17, 1860.
28234	Weiss, Jedediah, assignor to self and Charles Brodhead ..	Bethlehem, Pa.....	Telegraphic machines.....	May 15, 1860.
29554	Weist & Bates. (See Bates, E. and J., and M. Weist.)			
	Weitman, C., and T. Langdon. (See Langdon & Weitman.)			
	Weld, De Forest, <i>et al.</i> (See Bullock, Chester, assignor.)			
	Wells, Charles, and Henry Barth, assignors to the Cincinnati Type Foundry.	Cincinnati, Ohio.....	Printing presses.....	Aug. 7, 1860.
29836	Wells, Ephraim.....	Auburn, Miss.....	Cultivators.....	Aug. 28, 1860.
27491	Wells, Francis F.....	Texas, Texas.....	Pessaries.....	Mar. 13, 1860.
30357	Wells, J. L.....	St. Louis, Mo.....	Tanning, compositions for.....	Oct. 9, 1860.
	Wells, Littlefield & Langsdon. (See Langsdon, L. W., assignor.)			
28222	Wells, Morris.....	Brooklyn, N. Y.....	Kettle ears, making.....	May 8, 1860.
30950	Wells, Parker, assignor to E. Townsend and Wm. Wells..	Middleton, Mass.....	Pegging machines.....	Dec. 18, 1860.
28445	Wells, Samuel, assignor to Eliab Karr, Erastus Howard, and Edward F. Dickinson.	Elmore, Ohio.....	Moving buildings, machine for.....	May 22, 1860.
30030	Wells, Wallace, assignor to self and Samuel B. Wells ..	New York, N. Y.....	Engines, steam	Sept. 11, 1860.
28129	Wells, Wellington, <i>et al.</i> (See Mathushek, Frederick, ass'r.)	Boston, Mass.....	Lasting machines.....	May 1, 1860.
27940	Wendell, Isaac P.....	Philadelphia, Pa.....	Journal boxes.....	April 17, 1860.
30848	Wenman, U., and F. Ransom. (See Ransom & Wenman.)			
30997	Wentworth, Luther.....	Burlington, Iowa	Water, apparatus for elevating	Dec. 4, 1860.
27178	Wenzel, Adolphus E.....	New York, N. Y.....	Lathe-dog, automatic.....	Dec. 18, 1860.
	Werst, Decatur, and Aaron Puderbaugh.....	Waltz Township, Ind.....	Lathe for turning irregular forms.....	Feb. 14, 1860.
	Wesson, Daniel B., and Horace Smith. (See Smith & Wesson.)			
28320	West, C. O., J. R. Smith, and others.....	Martinsville, Ohio	Ditching machine.....	May 15, 1860.
30187	West, Frank H., assignor to Thomas S. Seabury	San Francisco, Cal.....	Compass, protractor	Sept. 25, 1860.
27849	Wescott, Burgan B.....	Camden, Ind.....	Washing machine	April 10, 1860.
27588	Westinghouse, George	Schenectady, N. Y.....	Crank boxes.....	Mar. 20, 1860.
27941	Westinghouse, George	Schenectady, N. Y.....	Separators, grain.....	April 17, 1860.
28223	Weston, Charles.....	Salem, Mass.....	Saws, reciprocating, method of hanging	May 8, 1860.
26869	Weston, Oliver E.....	Roxbury, Mass	Printing presses.....	Jan. 17, 1860.
	Weston, S. R., and J. R. Gilbert. (See Gilbert & Weston.)			
	Wethered, J. S., and J. E. Woodworth. (See Woodworth & Wethered.)			
26724	Wethered & Tiffany, <i>et al.</i> (See Gove, Andrew L., ass'r.)	Baltimore, Md.....	Furnaces, hot air	Jan. 3, 1860.
30439	Wethered, Samuel.....	Bethlehem, Pa.....	Glass, manufacture of.....	Oct. 16, 1860.
27753	Wetherill, Samuel.....	Erie, Pa.....	Voting register, legislative.....	April 3, 1860.
28321	Wetmore, J. W.....	Erie, Pa.....	Chairs, railroad.....	May 15, 1860.
29736	Wever, Pickens B.....	Scarborough, Ga.....	Press, cotton	Aug. 21, 1860.
30100	Wharton, William, jr.....	Philadelphia, Pa.....	Cars from one track to another, transferring.....	Sept. 18, 1860.
30598	Wheat, Jesse S.....	Wheeling, Va.....	Tanning, apparatus for.....	Nov. 6, 1860.

26940	Wheaton, M. B., and Edwin C. Thompson. (See Thompson & Wheaton.)	New York, N. Y.	Belt punch	Jan. 24, 1860.
27179	Wheeler, Calvin D.	New York, N. Y.	Sewing machines, marking gauges for	Feb. 14, 1860.
28225	Wheeler, Calvin D.	New Orleans, La.	Defecating cane juice, apparatus for	May 8, 1860.
28798	Wheeler, E. H.	Cannelton, Ind.	Shingle machine	June 19, 1860.
28927	Wheeler, E. T.	New York, N. Y.	Boot jack	June 26, 1860.
30368	Wheeler, George.	New York, N. Y.	Keyhole guard	Oct. 9, 1860.
30512	Wheeler, James E., and C. D. Williams. (See Wheeler, John W., assignor.)	Chicago, Ill.	Drying and cooling grain, machine for	Oct. 23, 1860.
26870	Wheeler, Jesse B.	Cleveland, Ohio	Water from wells, method of elevating and delivering	Jan. 17, 1860.
27250	Wheeler, John W.	Cleveland, Ohio	Mills, grain	Feb. 21, 1860.
30942	Wheeler, John W., assignor to C. D. Williams and James E. Wheeler.			
29025	Wheeler, N. W., and M. McDowell. (See McDowell & Wheeler.	Albany, N. Y.	Sifters, ash	Dec. 18, 1860.
27850	Wheeler, Seth.	Worcester, Mass.	Engines, steam, centrifugal governors for	July 3, 1860.
28134	Wheeler & Wilson Manufacturing Company. (See Wilson, Allen B., assignor.)			
28947	Wheelock, Jerome.	Cincinnati, Ohio.	Engines, locomotive, running gear of	April 10, 1860.
28721	Wheelwright, Whiton, et al. (See Woodward, Thomas T., assignor.)	West Acton, Mass.	Powder flasks	May 1, 1860.
28722	Whetstone, John L.	Charlestown, Mass.	Files, manufacture of	June 26, 1860.
30707	Whipple, George W., assignor to H. Rowell & Co.	Foreston, Ill.	Heating wagon tires, apparatus for	June 12, 1860.
28224	Whipple, James A., and George A. Stone. (See Stone & Whipple.	Cincinnati, Ohio.	Gas regulators	June 12, 1860.
29837	Whipple, Milton D., assignor to the Whipple File Company.	Hartford, Conn.	Burnishing machine	Nov. 20, 1860.
30171	Whitaker, Isaac N., assignor to self, J. H. Frees, and M. Hellar.	New Haven, Conn.	Musical instruments	May 8, 1860.
29116	Whitaker, Samuel H., assignor to self and William L. Thomas.	Bangor, Maine.	Amalgamators	Aug. 28, 1860.
29737	Whitcomb, Benjamin H. (See Graham, Edward H., ass'r.)	Cleveland, Ohio	Snut and scouring machines	Sept. 25, 1860.
	White, Albert M., assignor to Rogers & Brother, and Hartford Manufacturing Company.	Buffalo, N. Y.	Skates	July 10, 1860.
	White, Aloys.	Moscow, N. Y.	Trusses, hernial, construction of	Aug. 21, 1860.
	White, Daniel F., and John Stowell. (See Stowell, John, assignor.)			
	White, James.			
	White, James.			
	White, J. B. (See Dopp, H. William, assignor.)			
	White, Leonard and Ichabod Jewett.			
	White, Lewis B.			
	Whiteley & Steadman. (See Steadman, T. S., assignor.)			
	Whiteley, William N., jr. (See Hardeman, J. L., ass'r.)			
	Whiteman, Cox and Cox. (See Smith & Brown, assignors.)			
	Whiteman, Cox & Cox. (See Steffe & Sailor, assignors.)			
	Whiteman, John, et al. (See Vedder, N. S., assignor.)			
28121	Whitehead, Lewis.	Nunda, N. Y.	Halters	May 1, 1860.
29846	Whitehead, Lewis, and Samuel P. Kittle, assignors to S. P. Kittle.	New York, N. Y.	Mattress, spring	Aug. 28, 1860.
	Whiteside, G. B., et al. (See Miller, Aaron, assignor.)			

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
30849	Whitley, Smithwick.....	Tallahassee, Fla.....	Ploughs.....	Dec. 4, 1860.
29738	{ Whitman, Luther, and Ezra Whitman..... } Whitmore, M. J., et al. (See Cook, R. F., assignor.)	Winthrop, Maine..... } Baltimore, Md..... }	Casting cylinders for threshing machines.....	Aug. 21, 1860
29534	Whitney, Baxter D.....	Winchendon, Mass.....	Lathe.....	Aug. 7, 1860.
29929	Whitney, Edward P.....	Westfield, N. Y.....	Locks.....	Sept. 4, 1860.
30101	Whitney, E. P. (See Layman, Lewis, assignor.) Whitney, Ethan..... Whitney, G. W., and R. B. Hugunin. (See Hugunin & Whitney.)	Lynn, Mass.....	Bedstead, folding case.....	Sept. 18, 1860.
27589	Whitney, John M.....	Bolton, Mass.....	Odometers.....	Mar. 20, 1860.
28322	Whitney, Josiah M..... Whitney, Morgan & Priest. (See Rice, Benjamin F., ass'r.) Whiton, Brown, et al. (See Woodward, Thomas F., assignor.)	Astoria, N. Y.....	Fastener, sash.....	May 15, 1860.
29208	Whitson, J. C.....	Marion, N. C.....	Railroad switches.....	July 17, 1860.
29643	Whittemore, Amos.....	Cambridgeport, Mass.....	Nails, machine for making horse shoe.....	Aug. 14, 1860.
29930	Whittemore, David H.....	Lynchburg, Va.....	Hay and straw cutters.....	Sept. 4, 1860.
30172	Whitwell, J. G.....	New York, N. Y.....	Curtain fixtures.....	Sept. 25, 1860.
26960	Wiard, Norman, assignor to Daniel J. Townsend as trustee. Wiarda, John, et al. (See De Witt, Arnold, assignor.)	Janesville, Wis.....	Locomotive vehicles for running on ice or in water.....	Jan. 24, 1860.
28928	Wickersham, William.....	Boston, Mass.....	Nail cutting machine.....	June 25, 1860.
29931	Wicklin, E. S., and J. D. Weaver.....	Carlinville, Ill.....	Carrriages.....	Sept. 4, 1860.
27015	Wicks, Loren J..... Wiegand, S. Lloyd, and Joseph S. Miller. (See Miller & Wiegand.)	New York, N. Y.....	Skates.....	Jan. 31, 1860.
28226	Wigal, James P.....	Henderson, Ky.....	Furnaces, apparatus for feeding saw dust to.....	May 8, 1860.
27414	Wight, Henry, assignor to William C. McClan.....	Cambridge, Mass.....	Shoes, wooden soled.....	Mar. 6, 1860.
30699	Wilbur, Horatio N.....	Keokuk, Iowa.....	Soap composition.....	Nov. 20, 1860.
29346	Wilcox, Elijah D., assignor to self and G. D. Nourse..... Wilcox, Marcus M., et al. (See Maher, Edmund, ass'r.)	Bellingham, Mass.....	Grain cradles.....	July 24, 1860.
27180	Wilcox, Stephen, jr.....	Westerly, R. I.....	Air engines, hot.....	Feb. 14, 1860.
30700	Wilcox, Stephen, jr.....	Westerly, R. I.....	Air engines.....	Nov. 20, 1860.
30701	Wilcox, Stephen, jr.....	Westerly, R. I.....	Air engines.....	Nov. 20, 1860.
27016	Wilcox, William W.....	Middletown, Conn.....	Sail gremmet.....	Jan. 31, 1860.
29227	Wild, Albert, assignor to Dinkelspiel & Oppenheimer.....	New York, N. Y.....	Watchmakers' lathes.....	July 17, 1860
28028	Wilde, Robert T..... Wilde, R. T. (See Reynolds, H. A., assignor.)	New York, N. Y.....	Bonnet frames, manufacture of.....	April 24, 1860.
26803	Wilder, Aretus A.....	Detroit, Mich.....	Clap board.....	Jan. 10, 1860.
27493	Wilder, R. A.....	Cressona, Pa.....	Railroad switch stands.....	Mar. 13, 1860.
27662	Wilder, R. A.....	Schuylkill Haven, Pa.....	Engines, locomotive, feed water apparatus for.....	Mar. 27, 1860.
28122	Wilder, R. A.....	Cressona, Pa.....	Hoisting machinery.....	May 1, 1860.
30269	Willey, Henry Y.....	Philadelphia, Pa.....	Traps, animal.....	Oct. 2, 1860.
30440	Willey, Henry Y..... Wildman, R., and L. Platt. (See Platt & Wildman.)	Philadelphia, Pa.....	Cans, apparatus for sealing.....	Oct. 16, 1860.

28706	Wiley, James S., et al. (See Russell, Ephraim, assignor.)	Lockport, N. Y.	Butter worker	June 12, 1860.
28799	Wiley, William H.	Buffalo, N. Y.	Ventilation of casks containing liquids	June 19, 1860.
30275	Willhelm, Louis	Brownsville, Pa.	Boilers, steam furnaces for	Oct. 2, 1860.
26725	Wilkins, Henry	Fox Chase, Pa.	Cabbage cutter	Jan. 3, 1860.
29117	Wilkins, John C.	Milton, Pa.	Spoke machine	July 10, 1860.
30599	Wilkins, S. B.	Sidney, Ohio	Fence, flood	Nov. 6, 1860.
30102	Wilkinson, David C.	Cross Plains, Tenn.	Desks, school, system of	Sept. 18, 1860.
27503	Willard, Franklin W., assignor to self and E. G. Allen.	New York, N. Y.	Distilling, apparatus for	Mar. 13, 1860.
26739	Willard, Franklin W., assignor to E. G. Allen.	New York, N. Y.	Retorts, coal oil	Jan. 3, 1860.
27327	Willard, Franklin W., assignor to self and E. G. Allen.	New York, N. Y.	Distilling coal oil, apparatus for	Feb. 28, 1860.
30899	Willard, Franklin W.	New York, N. Y.	Lamps, vapor	Dec. 11, 1860.
29448	Willcox, Charles H., assignor to James Willcox.	New York, N. Y.	Sewing machines	July 31, 1860.
28430	Willett, John W.	Wareham, Mass.	Stool, camp	May 22, 1860.
29848	Williams, Aras G. (See Swan, James H., assignor.)	Weston, Mo.	Bee hives	Aug. 28, 1860.
27942	Williams, A. S., and Joseph H. Hopkins, et al. (See Durkee, William C., assignor.)	Haddonfield, N. J.	Washing machine	April 17, 1860.
28623	Williams, Charles K.	Quincy, Fla.	Boats, detachable hook for suspending	June 5, 1860.
28335	Williams, Charles L.	Allegheny, Pa.	Boiler furnaces, steam, apparatus for the combustion of smoke in.	May 15, 1860.
27401	Williams, David H., assignor to self and R. B. Fitts.	Philadelphia, Pa.	Fuel from coal dust, solidified	Mar. 6, 1860.
27851	Williams, E. D.	Kalamazoo, Mich.	Weighing grain, machine for	April 10, 1860.
28929	Williams, Isaac F., and John T. Trotter. (See Trotter & Williams.)	Greenville, Ga.	Cultivators	June 26, 1860.
29839	Williams, John M.	York Borough, Pa.	Lamps	Aug. 28, 1860.
28707	Williams, John Thomas	Buffalo, N. Y.	Paddle wheel, feathering	June 12, 1860.
28930	Williams, Richard, and Samuel Wilson.	Bairdstown, Ga.	Ploughs	June 26, 1860.
29209	Williams, R. S.	Providence, R. I.	Stop and fastening, window	July 17, 1860.
26804	Williams, Seymour, Morgan & Palmer. (See St. John, J. A., assignor.)	Augusta, Ga.	Bridle bits	Jan. 10, 1860.
28243	Williams, S. G., et al. (See Seymour, William H., ass'r.)	New York, N. Y.	Bundling wood, machines for	May 8, 1860.
27492	Williams, Turner, assignor to self and David Heaton, 2d.	Washington, D. C.	Bridle reins	Mar. 13, 1860.
29428	Williams, W. F. M.	Lynn, Mass.	Leather, machine for skiving	July 31, 1860.
30790	Williams, William L., assignor to self and Thomas J. O'Conner.	New York, N. Y.	Kindling wood, machines for bundling	Nov. 27, 1860.
27754	Williams, William L., assignor to self and Thomas J. O'Conner.	Elizabeth City, N. C.	Sowing machines	April 3, 1860.
28135	Williams, William W.	New York, N. Y.	Looms, narrow ware	May 1, 1860.
	Williamson, Aaron, assignor to self and Thomas France; Benjamin Hardy, administrator of said assignee, Williamson, deceased.			

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
29942	Williamson, George, assignor to L. S. Goble and H. E. Richards.	Newark, N. J.	Veneers, machine for chamfering.....	Sept. 4, 1860.
30660	Williamson, George, assignor to L. S. Goble and H. E. Richards.	Newark, N. J.	Clamp for holding cylinders to be polished	Nov. 13, 1860.
30369	Williamson, John R.	Washington, D. C.	Stirrups	Oct. 9, 1860.
27251	Willis, J. R., and W. Gale, jr. (See Hebbard, Alonzo, assignor.)	New York, N. Y.	Caoutchouc, composition formed of.....	Feb. 21, 1860.
29739	Willmann, Andreas	Petersburg, Va.	Cans, &c., machine for forming grooves in the necks of.....	Aug. 21, 1860.
29042	Willoughby, J. D.	Reeseville, N. Y.	Horse shoes, machine for making.....	July 3, 1860.
27181	Wills, Harry A., assignor to A. W. Kingsland.	Colden, N. Y.	Churn.....	Feb. 14, 1860.
29740	Willson, Abner	Reading, Pa.	Gas meters	Aug. 21, 1860.
28227	Willson, F. G., and R. Lounsbery. (See Lounsbery & Willson.)	Waynesboro, Ga.	Ploughs	May 8, 1860.
30597	Willson, John S.	Harrisburg, Pa.	Hay, &c., machines for cutting.....	Nov. 6, 1860.
26805	Willson, T. H. and D. T.	Pawtucket, R. I.	Spinning frames, ring.....	Jan. 10, 1860.
29026	Wilmarth, M. P.	Toledo, Ohio	Harvesting machines.....	July 3, 1860.
28123	Wilmington, William	Cincinnati, Ohio	Boiler regulator, steam.....	May 1, 1860.
29932	Wilson, Charles A.	Cincinnati, Ohio	Steam-heating apparatus	Sept. 4, 1860.
27402	Wilson, Charles A.	Mount Olive, N. C.	Cultivators.....	Mar. 6, 1860.
29027	Wilson, D., and J. W. Ramsay. (See Ramsay & Wilson.)	Cedar Hill, Texas	Ploughs, gang.....	July 3, 1860.
27017	Wilson, F. O.	Frankfort, N. Y.	Traps, animal.....	Jan. 31, 1860.
30513	Wilson, John P.	Illion, N. Y.	Stand, revolving spool.....	Oct. 23, 1860.
28931	Wilson, John P. and Free love V.	Winterset, Iowa	Seeding machines.....	June 26, 1860.
28228	Wilson Manufacturing Company. (See Wilson, John P., and John F. Thomas, assignees.)	Denton, Md.	Harvesters, automatic raking apparatus for	May 8, 1860.
26726	Wilson, Thomas	Caseyville, Ky.	Excavating machine, coal.....	Jan. 3, 1860.
30860	Winchester, Oliver F. (See Tyler, Henry B., assignor.)	Thomasville, Ga.	Corn, husking and shelling.....	Dec. 4, 1860.
28029	Wind, John, assignor to self and T. J. Bottoms.	New Albany, Ind.	Tombstones	April 24, 1860.
26740	Windell, Thomas, assignor to self and George R. Cannon.	San Juan, Cal.	Mining, valve chest for hydraulic.....	Jan. 3, 1860.
29429	Winegar, C., and S. H. Smith. (See Smith & Winegar.)	Buffalo, N. Y.	Leather, machines for crimping.....	July 31, 1860.
30850	Winham, Marcus A., assignor to I. B. Low and F. Smith.	Waterville, Me.	Photographic cameras.....	Dec. 4, 1860.
28527	Wing, Horace	Charlestown, Mass.	Mouldings, machine for cutting.....	May 29, 1860.
30617	Wing, Simon	Hudson, Mich.	Separators, grain.....	Sept. 11, 1860.
297504	Winslow, John B.	Hyde Park, Vt.	Wash bench, extension.....	Oct. 9, 1860.
30371	Wirgman, Charles, et al. (See Lowe, Samuel W., ass'r.)	Buffalo, N. Y.	Churn	Mar. 13, 1860.
297504	Wirts, S. M.	Springfield, Vt.	Window net and sash, combined	Oct. 9, 1860.
30370	Wiswall, Samuel			
	Wiswell, Daniel H., assignor to Charles W. Adams and Debby Pinner.			
	Wiswell, Isaac			

28624	Wetherby, Thomas H.	Worcester, Mass.	Engines, rotary	June 5, 1860.
27252	Withington, Charles B.	Rock, Wis.	Harvesters	Feb. 21, 1860.
30702	Witmer, Samuel H.	Cincinnati, Ohio.	Railroad rails to the cross-ties, securing	Nov. 20, 1860.
27852	Witt, Bennett F.	Dublin, Ind.	Harvesting machines	April 10, 1860.
29839	Wolcott, S., and W. C. Lostutter. (See Lostutter & Wolcott.)	Lebanon, Pa.	Planters, corn	Aug. 28, 1860.
29644	Wolf, D. & H.	Brooklyn, N. Y.	Cultivators	Aug. 14, 1860.
30514	Wolfe, Ferdinand.	Troy, N. Y.	Stoves, cooking	Oct. 23, 1860.
27253	Wolfe, Hicks & Co. (See Vedder, N. S., assignor.)	Boston, Mass.	Engraver's vise	Feb. 21, 1860.
27087	Wood, A. H.	Nashville, Tenn.	Composition, metallic, for fusible alloy, &c.	Mar. 20, 1860.
27086	Wood, Barnabas.	New York, N. Y.	Carriage thills, safety strap for securing	Feb. 7, 1860.
30372	Wood, Charles B.	New York, N. Y.	Carriage thills, attaching	Feb. 7, 1860.
28323	Wood, Charles B.	Worcester, Mass.	Fire-arms, breech loading	Oct. 9, 1860.
28031	Wood, Corbin O.	Byron, Ill.	Ploughs	May 15, 1860.
30173	Wood, Dudley, and Albert Byington.	Green Bay, Wis.	Crushing stones, machine for	April 24, 1860.
29535	Wood, E., et al. (See Twing, Wood & Elderhorst.)	Houma, La.	Cultivators	Sept. 25, 1860.
27955	Wood, George H.	Seneca, N. Y.	Willow peeler	Aug. 7, 1860.
29336	Wood, John F.	Troy, N. Y.	Cooper's tool	April 17, 1860.
27494	Wood, John M.	Watertown, N. Y.	Sharpening, edge tool	July 24, 1860.
29645	Wood, J. O. (See Gibbs, James E. A., assignor.)	Grand Ledge, Mich.	Jacks	Mar. 13, 1860.
30018	Wood, Joseph P., assignor to self and A. Johnson.	Hartford, Conn.	Brick machines	Aug. 14, 1860.
28229	Wood, John W.	Hoosick Falls, N. Y.	Harvesters, raking apparatus for	Sept. 11, 1860.
27663	Wood, Reuben.	Washington, D. C.	Sawing machine, scroll	June 19, 1860.
29741	Wood, T. H., H. S. Hubbell, and J. E. Roberts. (See Hubbell & Wood.)	Rochester, N. Y.	Air pumps for steam engines	May 8, 1860.
30550	Wood, Thomas H., and H. S. Hubbell. (See Hubbell & Wood.)	Lynn, Mass.	Chair, reclining	Mar. 27, 1860.
28528	Woodcock, Seth D., et al. (See Keene, George A., ass'r.)	Williamsburg, Pa.	Ploughs	Aug. 21, 1860.
27495	Woodcock, Bancroft.	Watertown, N. Y.	Valves for steam engines	Oct. 30, 1860.
29840	Woodford, Henry E.	Brandon, Wis.	Churn	May 29, 1860.
27403	Woodin, D. M.	Biddeford, Me.	Cards, machine, cleaning	Mar. 13, 1860.
28625	Woodman, Horace.	Cincinnati, Ohio.	Furnaces	Aug. 28, 1860.
28626	Woodman, David T.	Rahway, N. J.	Steam and fire regulator	Mar. 6, 1860.
26806	Woodrow, David T.	Rahway, N. J.	Harvesters	June 5, 1860.
26942	Woodruff, E. W., et al. (See Burrows, Henry, assignor.)	Ann Arbor, Mich.	Barometers	June 5, 1860.
29028	Woodruff, Joseph.	Southington, Conn.	Meat cutter	Jan. 10, 1860.
28230	Woodruff, Lum.	Philadelphia, Pa.	Cars, seats and couches for railroad	Jan. 24, 1860.
28753	Woodruff, Oliver D.	Utica, N. Y.	Boiler feeders for steam engines	July 3, 1860.
28932	Woodruff, Theodore T.	Boston, Mass.	Musical instruments, reed	May 8, 1860.
28043	Woods, Edwin A.	New York, N. Y.	Boilers, steam, feed water apparatus for	April 10, 1860.
28043	Woods, George.	Philadelphia, Pa.	Indicators, railroad station	June 26, 1860.
28043	Woods, S. A., et al. (See Gray, Solomon S., assignor.)	Nashua, N. H.	Temples	April 24, 1860.
28043	Woodward, B. I., and Fuller & Wright. (See Wright, Albert H., assignor.)			
28043	Woodward, Calvin and George M.			
28043	Woodward, E. M. and James E.			
28043	Woodward, J. H., assignor to W. W. Dutcher & Co.			

Patentees of inventions and designs, 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
28529	Woodward, Stephen W.	Buffalo, N. Y.	Washing machine.	May 29, 1860.
28336	Woodward, Thomas T., assignor to self, Whiton, Brown & Wheelwright.	South Reading, Mass.	Signal apparatus.	May 15, 1860.
29118	Woodward, Thomas T.	South Reading, Mass.	Signal lantern.	July 10, 1860.
27496	Woodworth, A. J.	Henrico County, Va.	Soap.	Mar. 13, 1860.
29210	Woodworth, O. H.	Coffeeville, Miss.	Watches.	July 17, 1860.
30780	Woodworth, O. H.	Upper Marlborough, Md.	Fences.	Nov. 27, 1860.
28708	Woodworth, S. E., and J. S. Wethered.	San Francisco, Cal.	Gas burners.	June 12, 1860.
30781	Woodworth, Selim E., and James S. Wethered.	San Francisco, Cal.	Amalgamators.	Nov. 27, 1860.
27404	Woolfork, Austin.	Parish of Iberville, La.	Ditching machine.	Mar. 6, 1860.
28801	Woolfork, L. B.	Nashville, Tenn.	Ploughs, steam.	June 19, 1860.
28933	Woolfork, L. B.	Nashville, Tenn.	Ploughs, steam.	June 19, 1860.
30851	Woolley, G. W.	Philadelphia, Pa.	Pens, fountain.	Dec. 4, 1860.
1348	Woolsen, Charles J.	Cleveland, Ohio.	Stoves, door of cooking.	Dec. 4, 1860.
1349	Woolsen, Charles J.	Cleveland, Ohio.	Stove plate.	Dec. 4, 1860.
28431	Wooster, Charles.	New York, N. Y.	Gas retorts.	May 22, 1860.
29933	Wooster, David.	Seymour, Conn.	Lightning rods.	Sept. 4, 1860.
30174	Worcester, Joseph.	Newport, N. Y.	Annealing apparatus.	Sept. 25, 1860.
27018	Worden, Alva.	Upsilantic, Mich.	Shears, holders for tinman's.	Jan. 31, 1860.
29742	Worden, Charles.	Upsilantic, Mich.	Cisterns, apparatus for regulating the flow of water from.	Aug. 21, 1860.
26939	Worden, Leonard J.	Utica, N. Y.	Shoes, lace fastenings for.	Jan. 24, 1860.
28934	Workman, William.	Ripon, Wis.	Seeding machines.	June 26, 1860.
29841	Wormell, W. E.	Germanstown, Tenn.	Ploughs.	Aug. 28, 1860.
30904	Worthen, S. A., assignor to self and William Walker.	Morrisville, Vt.	Sawing machines, cross-cut.	Dec. 11, 1860.
27854	Worthen, William E.	New York, N. Y.	Lock.	April 10, 1860.
28030	Worthen, William E.	New York, N. Y.	Sash, metallic.	April 24, 1860.
27254	Wray, Charles.	San Francisco, Cal.	Iron, furnace for plating.	Feb. 21, 1860.
27505	Wright, Albert H., assignor to self, I. C. Fuller, and B. I. Woodward.	Philadelphia, Pa.	Cables, ship's, elastic chain or surge spring for.	Mar. 13, 1860.
28032	Wright, Benjamin H.	Rome, N. Y.	Boiler, steam.	April 24, 1860.
28802	Wright, Benjamin, and John Bean. (See Bean & Wright.)	Sycamore, Ill.	Churn.	June 19, 1860.
28935	Wright, C., and William Phelps. (See Phelps & Wright.)	Leroy, Ohio.	Apples, cutting and coring.	June 26, 1860.
26741	Wright, Clark, and William Phelps.	Sheffield, England.	Steel, tempering.	Jan. 3, 1860.
30782	Wright, E. S., and A. Cutler. (See Cutler & Wright.)	Sheffield, England.	Steel and iron wire, rolling.	Nov. 27, 1860.
30601	Wright, George C.	New York, N. Y.	Braces, spinal.	Nov. 6, 1860.
30401	Wright, John, assignor to James Chesterman.	London, England.	Evaporators of cane juice.	Oct. 16, 1860.
30515	Wright, L. B.	Norfolk, Va.	Ventilators for railroad cars.	Oct. 23, 1860.
30998	Wright, Richard B.	Newark, N. J.	Saw gauge, circular.	Dec. 18, 1860.
28709	Wright, Lysander.	Newark, N. Y.	Gas burners.	June 12, 1860.
28820	Wright, Wendell.	Philadelphia, Pa.	Trap, animal.	June 19, 1860.
28124	Wright, William, assignor to self and John Brady.	Green Hill, Ga.	Presses, cotton.	May 1, 1860.
27182	Wright, Young F.	St. Louis, Mo.	Mills, smut.	Feb. 14, 1860.

31002	Wurzbach, A. C., and G. W. Grader. (See Grader & Wurzbach.)	New York, N. Y.	Cigars, machines for making.	Dec. 18, 1860.
27855	Wyherd, John.	New York, N. Y.	Reflector, night light.	April 10, 1860.
30783	{ Wyckoff, John N., and Thomas M. Fell.	Brooklyn, N. Y.	Amalgamator.	Nov. 27, 1860.
29536	Wygant, John H.	Melvin Mines, Va.	Cars, city railroad, stopping and starting.	Aug. 7, 1860.
29029	Wynblad, Hjalmar.	Hackensack, N. J.	Mousing book.	July 3, 1860.
	Yale, Colin W., and Henry Parker. (See Oliver, Gilbert W.)	West Hoboken, N. J.		
28710	Yale, Linus, jr.	Philadelphia, Pa.	Locks.	June 12, 1860.
26943	Yarbrough, Joseph.	Milton, N. C.	Mill stones, dressing.	Jan. 24, 1860.
28803	Yates, James, et al. (See Fletcher, D. G., assignor.)	Dubuque, Iowa.	Pots, coffee.	June 19, 1860.
30442	Yeatman, Samuel.	Providence, Ala.	Saws, gin, filing.	Oct. 16, 1860.
28804	Yentzer, Enoch S.	Middletown, Pa.	Sewing machines.	June 19, 1860.
27255	Yerkes, Jones.	Philadelphia, Pa.	Refrigerator.	Feb. 21, 1860.
29030	Yost, Christian.	Intercourse, Pa.	Fence rails, machine for pointing.	July 3, 1860.
27605	Yost, George W. N., assignor to G. W. N. Yost & Co.	Yellow Springs, Ohio.	Soap.	Mar. 20, 1860.
2764	Yost, George W. N., assignor to G. W. N. Yost & Co.	Yellow Springs, Ohio.	Planters, corn.	April 3, 1860.
29131	Yost, George W. N., assignor to G. W. N. Yost & Co.	Yellow Springs, Ohio.	Harvesters of corn and sugar cane.	July 10, 1860.
29211	Yost, G. W. N.	Yellow Springs, Ohio.	Cultivators, cotton.	July 17, 1860.
29849	Yost, G. W. N., assignor to self and John F. Watson.	Yellow Springs, Ohio.	Cultivators.	Aug. 28, 1860.
29934	Yost, G. W. N.	Yellow Springs, Ohio.	Cultivators.	Sep. 4, 1860.
30019	Yost, G. W. N.	Yellow Springs, Ohio.	Chains, link for.	Sep. 11, 1860.
29537	Yousmans, Walter.	Waterford, N. Y.	Car wheels.	Aug. 7, 1860.
29449	Young, C. M., assignor to self and E. Brown.	Sinclairville, N. Y.	Stave jointing machines.	July 31, 1860.
28936	Young, E., and Francis P. Heller. (See Heller & Young.)	Fayetteville, Mo.	Planters, seed.	June 26, 1860.
26727	Young, Elijah.	Boston, Mass.	Pen rack.	Jan. 3, 1860.
27019	Young, James.	Frederick, Md.	Heel spur.	Jan. 31, 1860.
30103	Young, McClintock, jr.	Frederick, Md.	Harvesters, combined rake and reel for.	Sep. 18, 1860.
30276	Young, McClintock, jr.	Frederick, Md.	Reaping and mowing machines.	Oct. 2, 1860.
30999	Young, McClintock, jr.	Frederick, Md.	Harvesting machines.	Dec. 18, 1860.
	Young, R. W., and N. B. Webster. (See Webster & Young.)			
27856	Ziegler, Joseph.	Baltimore, Md.	Alarm lock.	April 10, 1860.
26728	Zimmann, George Frederick.	Philadelphia, Pa.	Table, ironing.	Jan. 3, 1860.
28937	Zimmerman, Henry M.	Washington, D. C.	Hinge.	June 26, 1860.
30188	Zollickoffer, William T., assignor to self and Wm. Brown	Shelbyville, Tenn.	Ploughs.	Sept. 25, 1860.

ALPHABETICAL LIST OF PERSONS TO WHOM PATENTS HAVE BEEN REISSUED DURING THE YEAR 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date of reissue.	Date of original patent.
946	Adams, Henry B., assignor to Simon B. Hunt.	Brooklyn, N. Y.	Boiler feeder, automatic.	April 24, 1860	Jan. 4, 1859.
926	Aiken, Walter and Jonas B., assignors to Herrick and Jonas B. Aiken, and Herrick & Aiken, assignors to Jonas B. Aiken.	Franklin, N. H.	Knitting machines.	Mar. 13, 1860	Sept. 11, 1855.
992	Albro, James.	Elizabeth, N. J.	Printing oilcloths.	July 3, 1860	} Division, June 7, 1859.
993	Albro, James.	Elizabeth, N. J.	Printing oilcloths.	July 3, 1860	
1017	Aldridge, Hiram.	Michigan City, Ind.	Grain separators, shoe for.	July 31, 1860	
925	Anganar, E. H.	New Orleans, La.	Wharves, piers, &c., mode of staying piles for.	Mar. 6, 1860	May 24, 1859.
1000	Arnall, William M.	Sperryville, Va.	Separators and cleaners, grain.	July 10, 1860	July 12, 1859.
1024	Ashcroft, Edward H.	Boston, Mass.	Gases, apparatus for naphthalizing.	Aug. 14, 1860	May 1, 1860.
1007	Ball, Ephraim.	Canton, Ohio.	Mowing machines.	July 17, 1860	June 5, 1860.
1008	Ball, Ephraim.	Canton, Ohio.	Mowing machines.	July 17, 1860	} Division, Dec. 1, 1857; reissued Sept. 27, 1859.
1009	Ball, Ephraim.	Canton, Ohio.	Mowing machines.	July 17, 1860	
1010	Ball, Ephraim.	Canton, Ohio.	Mowing machines.	July 17, 1860	} Division, Dec. 1, 1857; reissued Sept. 27, 1859.
1011	Ball, Ephraim.	Canton, Ohio.	Mowing machines.	July 17, 1860	
1012	Ball, Ephraim.	Canton, Ohio.	Mowing machines.	July 17, 1860	} Division, June 20, 1854.
1013	Ball, Ephraim.	Canton, Ohio.	Mowing machines.	July 17, 1860	
1071	Bartholomew, Frederick H.	New York, N. Y.	Valve cocks, method of governing the action of.	Nov. 13, 1860	} Division, June 20, 1854.
1072	Bartholomew, Frederick H.	New York, N. Y.	Valve cocks, method of governing the action of.	Nov. 13, 1860	
890	Beckers, Alexander.	New York, N. Y.	Stereoscopic pictures, apparatus for exhibiting.	Jan. 31, 1860	} April 7, 1857.
1035	Berdan, Hiram.	New York, N. Y.	Ovens, bakers'.	Sept. 11, 1860	
1073	Berry, Robert M.	New York, N. Y.	Sewing machines.	Nov. 13, 1860	Oct. 20, 1857.
967	Bertrand, C. E.	Williamsburg, N. Y.	Sugar mould, carriages.	May 29, 1860	Dec. 7, 1858.
1018	Bidwell, Salmon, assignor to New York Car and Steam-boat Gas Company.	New York, N. Y.	Gas regulators.	July 31, 1860	Mar. 30, 1858.
1015	Bleecker, T. B.	New York, N. Y.	Bedstead, folding.	July 24, 1860	Sept. 21, 1858.
1066	Bliss, Jeremy W.	Hartford, Conn.	Door plates.	Oct. 16, 1860	April 17, 1847.
994	Bly, Douglas.	Rochester, N. Y.	Legs, artificial.	July 3, 1860	July 13, 1858.
1070	Bolles, Solomon E.	Matapoisett, Mass.	Stones, machines for raising and transporting.	Nov. 6, 1860	May 17, 1859.
1001	Bonham, J. H., deceased, by A. E. Bonham, admin'r.	Elizabethtown, Ohio.	Seeding machine.	July 10, 1860	April 10, 1855.
1045	Booth, Jonathan L.	Rochester, N. Y.	Separators, grain.	Sept. 25, 1860	Dec. 8, 1857.
954	Bradley, Christopher C., jr.	Syracuse, N. Y.	Iron kettles, cast, grinding the inner surface of.	May 1, 1860	Sept. 20, 1859.
966	Brinckerhoff, Cornelius R.	Batavia, N. Y.	Harvesting machine.	May 22, 1860	Feb. 24, 1857.
891	Bristol, Richard C.	Chicago, Ill.	Valves, slide, for steam engines.	Feb. 7, 1860	May 24, 1859.
953	Brown, Adolph and Felix.	New York, N. Y.	Sugar, loaf, machine for cutting.	May 1, 1860	June 21, 1859.
951	Brown, C. B., assignor to Aultman & Co.	Griggsville, Ill.	Harvesters, grain and grass.	May 1, 1860	Mar. 25, 1856.
952	Brown, C. B., assignor to Aultman & Co.	Griggsville, Ill.	Harvesters, grain and grass.	May 1, 1860	} Division, Dec. 7, 1852.
924	Brown, Ephraim.	Lowell, Mass.	Burglars' alarm.	Mar. 6, 1860	
1036	Brown, George W.	Galesburg, Ill.	Planters, seed.	Sept. 11, 1860	} Division, Feb. 2, 1853, reissued February 16, 1858.
1037	Brown, George W.	Galesburg, Ill.	Planters, seed.	Sept. 11, 1860	
1038	Brown, George W.	Galesburg, Ill.	Planters, seed.	Sept. 11, 1860	
1039	Brown, George W.	Galesburg, Ill.	Planters, seed.	Sept. 11, 1860	} Division, May 8, 1855; reissued Nov. 10, 1857.
1040	Brown, George W.	Galesburg, Ill.	Planters, seed.	Sept. 11, 1860	
1091	Brown, George W.	Galesburg, Ill.	Planters, seed.	Dec. 11, 1860	} Division, May 8, 1855; reissued Nov. 10, 1857.
1092	Brown, George W.	Galesburg, Ill.	Planters, seed.	Dec. 11, 1860	

1093	Brown, George W.	Galesburg, Ill.	Planters, seed.	Dec. 11, 1860	Do.
1094	Brown, George W.	Galesburg, Ill.	Planters, seed.	Dec. 11, 1860	
1095	Brown, George W.	Galesburg, Ill.	Planters, seed.	Dec. 11, 1860	
934	Bryant, Walter, assignor to James W. Reed.	Boston, Mass.	Furnace, air heating.	Mar. 27, 1860	Oct. 24, 1854.
1061	Burger, H. R.	Richmond, Va.	Saws, machine for grinding.	Oct. 16, 1860	Sept. 11, 1860.
1027	Burke, Peter N.	Buffalo, N. Y.	Stoves.	Aug. 21, 1860	July 19, 1859.
915	Burts, Henry, assignor to the Newark Patent Hosiery Company.	Boston, Mass.	Knitting stockings, &c., machine for.	Mar. 6, 1860	Division, Sept. 23, 1843; and extended for seven years after 23d Sept., 1857.
916	Burts, Henry, assignor to the Newark Patent Hosiery Company.	Boston, Mass.	Knitting stockings, &c., machine for.	Mar. 6, 1860	
978	Carr, William S.	New York, N. Y.	Closets, water.	June 12, 1860	Aug. 5, 1856.
1031	Clark, T., assignor to Clark's Patent Steam and Fire Regulator Company.	Bedford, N. Y.	Boilers, steam, safety apparatus for.	Aug. 28, 1860	Aug. 21, 1847.
874	Coes, Aury G.	Worcester, Mass.	Screw wrench.	Jan. 3, 1860	Aug. 16, 1853.
901	Cole, Richard H.	St. Louis, Mo.	Machines, nut making.	Feb. 21, 1860	June 3, 1856.
902	Cole, Richard H.	St. Louis, Mo.	Nut machine.	Feb. 21, 1860	June 3, 1856.
979	Collins, James P.	Troy, N. Y.	Water wheel.	June 12, 1860	Dec. 6, 1859.
1041	Cowling, Henry.	Corpus Christi, Texas.	Ploughs, gang.	Sept. 18, 1860	Nov. 26, 1850.
922	Crocker, D. W.	Deposit, N. Y.	Railroad chairs.	Mar. 6, 1860	Jan. 25, 1859.
921	Crosby, Addison.	Fredonia, N. Y.	Valve for steam engines.	Mar. 6, 1860	Aug. 30, 1859.
1019	Cutting, J. A., and L. H. Bradford.	Boston, Mass.	Photolithography.	July 31, 1860	Mar. 16, 1858.
903	Dick, James M.	Buffalo, N. Y.	Railroad frogs.	Feb. 21, 1860	Aug. 3, 1858.
1032	Dietz, Michael A.	Brooklyn, N. Y.	Lamps.	Sept. 4, 1860	Mar. 8, 1859.
904	Dolph, George C.	West Andover, Ohio.	Mowing machines.	Feb. 21, 1860	Sept. 8, 1857.
1067	Dorsey, Owen.	Dorseyville, Md.	Harvester rakes.	Oct. 23, 1860	Mar. 4, 1856.
980	Drake, Nathaniel.	Newton, N. J.	Corn shellers.	June 12, 1860	April 3, 1860.
937	Dustin, Selah.	Detroit, Mich.	Boilers, steam, low water alarm for.	Mar. 27, 1860	April 26, 1859.
950	Ellis, Thomas, assignor to self and W. A. and A. D. Ellis.	Philadelphia, Pa.	Casting boxes for wheel hubs.	May 1, 1860	Dec. 6, 1859.
1020	Emerson, James, assignor to William H. Gilmore.	Worcester, Mass.	Windlass, ships.	July 31, 1860	April 17, 1855.
889	Fay, Lucian.	Cincinnati, Ohio.	Roofs, sheet metal, machine for seaming.	Jan. 24, 1860	July 28, 1857.
1046	Ferguson, Sylvester and George H.	Malden Bridge, N. Y.	Printing presses, machine for feeding paper to.	Sept. 25, 1860	July 26, 1859.
919	Fisk, A. D., assignor to John G. Forbes and R. Squiers.	New York, N. Y.	Coffins.	Mar. 6, 1860	Nov. 14, 1848.
1047	Fulton, William.	Cranberry, N. J.	Lamps.	Sept. 25, 1860	Aug. 3, 1858; reissued Sept. 13, 1859.
938	Gale, Warren.	Chicopee Falls, Mass.	Straw cutters.	April 3, 1860	Sept. 12, 1854.
981	Gardiner, Perry G.	New York, N. Y.	Cars and carriages, railroad, springs for.	June 12, 1860	April 26, 1859.
983	Godsoe, William.	Manchester, Mass.	Steering apparatus.	June 12, 1860	June 7, 1859.
1033	Goodale, E. W.	Clinton, Mass.	Paper bags, machine for making.	Sept. 4, 1860	May 29, 1855.
1084	Goodyear, Charles, executor of Charles Goodyear, deceased.	New York, N. Y.	Caoutchouc, manufacture of.	Nov. 20, 1860	Division, June 15, 1844; reissued Dec. 25, 1849; extended for 7 years from and after June 15, 1858.
1085	Goodyear, Charles, executor of Charles Goodyear, deceased.	New York, N. Y.	Caoutchouc, act of preparing.	Nov. 20, 1860	Division, Aug. 5, 1851; reissued April 8, 1856.
1021	Gordon, George P.	New York, N. Y.	Printing presses.	July 31, 1860	Aug. 22, 1854.
1022	Gordon, George P.	New York, N. Y.	Printing presses.	July 31, 1860	Aug. 21, 1849; reissued Dec. 18, 1849.
945	Gray, Solomon S., assignor to S. S. Gray and S. A. Woods.	Boston, Mass.	Planing lumber "out of wind".	April 17, 1860	Aug. 21, 1849; reissued Dec. 18, 1849.
923	Hall, Edward and Joseph L.	Cincinnati, Ohio.	Fire-proof safes.	Mar. 6, 1860	Aug. 21, 1849; reissued Dec. 18, 1849.
1077	Hardeman, John L., assignor to William N. Whitely, jr.	Arrow Rock, Mo.	Hemp cutters.	Nov. 13, 1860	Aug. 21, 1855.
949	Hartell, Thomas R.	Philadelphia, Pa.	Bottles, &c., apparatus for making glass stoppers for.	April 24, 1860	Oct. 19, 1858.
1079	Herrick, Hiram H., assignor to C. J. F. Eastman.	East Boston, Mass.	Carpet sweeper.	Nov. 20, 1860	Aug. 17, 1858.
955	Hildreth, George W.	Lockport, N. Y.	Bells, mode of hanging.	May 1, 1860	June 19, 1855.
969	Hinckly, Charles H., assignor to the New York Rubber Co.	Stonington, Conn.	Hose pipe, coating.	June 5, 1860	Sept. 29, 1857.

Alphabetical list of persons to whom patents have been reissued during the year 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date of reissue.	Date of original patent.
884	Howe, Tyler	Cambridgeport, Mass.	Bed bottoms	Jan. 17, 1860	June 13, 1854.
1074	Hufnagel, Bernhard	New York, N. Y.	Photographic baths	Nov. 13, 1860	Oct. 5, 1858.
939	Hurst, Abraham R.	Chambersburg, Pa.	Excavators, manure	April 3, 1860	Aug. 29, 1854.
917	Hussey, Obed	Baltimore, Md.	Reaping machines	Feb. 28, 1860	Aug. 7, 1847; reissued April 14, 1857; reissued June 21, 1859.
1098	James, Charles T.	Providence, R. I.	Projectiles	Dec. 11, 1860	Feb. 26, 1856.
995	Jane, Reuben	Otego, N. Y.	Boats, canal, attaching paddle wheels to	July 3, 1860	Nov. 24, 1857.
1096	Johnston, James J.	Allegheny, Pa.	Corn shellers	Dec. 11, 1860	April 19, 1859.
1048	Joslin, William	Cleveland, Ohio	Carriages, machinery for manufacturing	Sept. 25, 1860	Jan. 19, 1847.
989	Kakeles, Seligman	New York, N. Y.	Lenses, fluid	June 26, 1860	April 24, 1860.
959	Kidd, Whitten E.	New York, N. Y.	Bonnet frames	May 15, 1860	April 13, 1858.
960	Knoderer, Henry F. and Levi F.	Chillicothe, Ohio	Composition for preventing incrustation of steam boilers.	May 15, 1860	Jan. 3, 1860.
961	La Forge, Samuel	Cleveland, Ohio	Leather goods, water proof	May 15, 1860	Feb. 28, 1860.
931	Lefebvre, Louis	New Orleans, La.	Sugar juices, furnaces for evaporating	Mar. 20, 1860	Nov. 23, 1858; additional improvement Jan. 24, 1860.
1065	Lefebvre, Louis	New Orleans, La.	Boilers, steam	Oct. 16, 1860	May 3, 1859.
1044	Lester, Henry	Cincinnati, Ohio	Roofing composition	Sept. 18, 1860	Jan. 11, 1859.
1053	Lindner, Edward	New York, N. Y.	Fire-arms, breech loading	Oct. 2, 1860	Division, Mar. 29, 1859.
1054	Lindner, Edward	New York, N. Y.	Fire-arms, breech loading	Oct. 2, 1860	Feb. 22, 1859.
1026	Lowry, Joseph L.	Pittsburgh, Pa.	Fire plugs	Aug. 14, 1860	June 22, 1858.
1034	Mace, Alonzo M.	Springfield, Mass.	Lamps, vapor	Sept. 4, 1860	Oct. 23, 1858.
932	Mallerd, William	Bridgeport, Conn.	Gas regulators	Mar. 20, 1860	April 7, 1857.
935	Manny, Pells	Waddams' Grove, Ill.	Harvesters	May 27, 1860	April 7, 1857.
940	Marcher, Robert	New York, N. Y.	Enamelling mouldings, machines for	April 3, 1860	July 26, 1859.
947	Marshall, Moses	Lowell, Mass.	Looms for weaving figured fabrics	April 24, 1860	Dec. 11, 1849.
1029	Marston, Stanhope W., assignor to James M. Cooper	New York, N. Y.	Fire-arms, trigger operating revolving	Aug. 21, 1860	Jan. 7, 1851; reissued July 26, 1859.
887	Massey, William, assignor to C. L. Crowell and Robert Smith.	Greene County, Ill.	Iron bands, machine for contracting the circumference of wrought.	Jan. 24, 1860	Division, July 3, 1849.
888	Massey, William, assignor to C. L. Crowell and Robert Smith.	Greene County, Ill.	Iron bands, machine for contracting the circumference of wrought.	Jan. 24, 1860	Nov. 30, 1858.
1090	Mayall, Thomas J., assignor to John H. Cheever	Roxbury, Mass.	Rubber, hard, manufacture of	Dec. 11, 1860	Division, May 11, 1858.
972	McCormick, L. J., W. S., and Cyrus H., assignors to C. H. McCormick.	Chicago, Ill.	Reaping and mowing machines	June 5, 1860	
973	McCormick, L. J., W. S., and Cyrus H., assignors to C. H. McCormick.	Chicago, Ill.	Reaping and mowing machines	June 5, 1860	
974	McCormick, L. J., W. S., and Cyrus H., assignors to C. H. McCormick.	Chicago, Ill.	Reaping and mowing machines	June 5, 1860	
975	McCormick, Cyrus H.	Chicago, Ill.	Cutting grass, machines for	June 5, 1860	Division, Sept. 21, 1858.
976	McCormick, Cyrus H.	Chicago, Ill.	Cutting grass, machines for	June 5, 1860	
977	McCormick, Cyrus H.	Chicago, Ill.	Cutting grass, machines for	June 5, 1860	
927	McMannus, John	New York, N. Y.	Hats, ventilation of	Mar. 13, 1860	Jan. 3, 1860.
1080	McMunn, John B.	Port Jervis, N. Y.	Lubricating compound	Nov. 20, 1860	Jan. 3, 1860.

906	Mefford, David M.	Jeffersonville, Ind.	Corn huskers.	May 15, 1860	Dec. 22, 1857.
892	Mershon, Ralph S., assignor to self and J. M. Harper.	Philadelphia, Pa.	Time keepers, regulator for.	Feb. 7, 1860	April 26, 1859.
885	Mitchell, Thomas.	Lansingburg, N. Y.	Brush handles, hair, machine for finishing.	Jan. 17, 1860	June 28, 1859.
990	Mitchell, Thomas.	Lansingburg, N. Y.	Brush handles, hair, machine for finishing.	June 26, 1860	June 28, 1859; reissued Jan. 17, 1860.
1062	{ Monroe, James F. and Edwin P., assignors to Edwin P. Monroe	New York, N. Y.	Egg beater	Oct. 16, 1860	April 19, 1859.
1099	Moore, Spencer.	Fitchburg, Mass.	Threshing machines.	Dec. 18, 1860	Oct. 3, 1854.
893	Nelson, Richard L.	Central Bridge, N. Y.	Life preservers to vests, mode of attaching.	Feb. 7, 1860	Nov. 21, 1854.
998	Nesen, Joseph E., assignor to H. Baldwin, jr.	Ocala, Fla.	Harvesters and binders	July 3, 1860	{ Division, Aug. 27, 1853.
999	Nesen, Joseph E., assignor to H. Baldwin, jr.	Buffalo, N. Y.	Harvesters and binders	July 3, 1860	Nov. 1, 1859.
991	Neumann, Caesar	Buffalo, N. Y.	Skirts, skeleton hoop.	June 26, 1860	Dec. 20, 1859.
1105	Newman, Carlton	New York, N. Y.	Cans, preserve.	Dec. 18, 1860	Jan. 15, 1850.
1002	Norcross, Nicholas G.	Birmingham, Pa.	Saw mills, circular.	July 10, 1860	Nov. 2, 1858.
1068	Nyce, Benjamin M.	Lowell, Mass.	Refrigerator.	Oct. 23, 1860	Aug. 19, 1856, reissued, Feb. 17, 1857.
933	Osborn, William, deceased, by Mary Jane Osborn, administratrix.	Kingston, Ind.	Bonnets and bonnet frames, machine for pressing.	Mar. 27, 1860	Jan. 10, 1860.
894	Palmenberg, Joseph R.	Louisville, Ky.	Frame for ladies dresses	Feb. 7, 1860	{ Division, June 21, 1859.
996	Palser, Joseph W., and Gardner Howland.	New York, N. Y.	Paper pulp, apparatus for the manufacture of	July 3, 1860	June 7, 1859.
997	Palser, Joseph W., and Gardner Howland.	Fort Edward, N. Y.	Paper pulp, apparatus for the manufacture of	July 3, 1860	Sept. 28, 1858.
1056	Perkins, Edward L.	Fort Edward, N. Y.	Paper and other fabrics, machines for drying.	Oct. 9, 1860	April 24, 1860.
1063	Pye, Thomas L.	Roxbury, Mass.	Locks	Oct. 16, 1860	Mar. 6, 1855.
1016	Rains, George W.	New York, N. Y.	Boilers, steam, feed water apparatus for	July 24, 1860	April 28, 1857.
1089	Reed, Jesse, assignor to Catharine M. Hunt.	Newburgh, N. Y.	Steering apparatus	Dec. 4, 1860	Dec. 21, 1858.
920	Rice, Benjamin F., assignor to Charles H. Morgan, L. Whitney, jr., and T. Priest.	Marshfield, Mass.	Paper bags, machine for making	Mar. 6, 1860	Mar. 6, 1855.
905	Robbins, Martin, and Jas. Powell, assignors to Jas. Powell.	Clinton, Mass.	Faucets	Feb. 21, 1860	Dec. 21, 1858.
1057	Rogers, John R.	Cincinnati, Ohio.	Seeders, percussion	Oct. 9, 1860	Mar. 6, 1860.
918	Roots, P. H.	Sacramento, Wis.	Water wheels	Feb. 28, 1860	Mar. 15, 1859.
906	Sampson, Blaney E., assignor to J. B. Proctor.	Connersville, Ind.	Cars, railroad, pole coupling for	Feb. 21, 1860	July 27, 1858.
936	Sanders, J. Milton	Boston, Mass.	Gas, production of illuminating.	Mar. 27, 1860	July 27, 1858.
895	Sanford, N. C.	Cincinnati, Ohio.	Skates	Feb. 7, 1860	Feb. 20, 1855.
1075	Scarlett, William	Meriden, Conn.	Skates	Nov. 13, 1860	May 29, 1860.
1055	Seely, Samuel J., assignor to C. W. Durant.	Aurora, Ill.	Cars, railroad	Oct. 2, 1860	April 24, 1860.
1050	Sexton, B.	New York, N. Y.	Cloth, machinery for drying	Sept. 25, 1860	May 8, 1860.
1003	Seymour, William H., assignor to self, D. S. Morgan, A. Palmer, and S. G. Williams.	East Windsor, Conn.	Reaping machines.	July 10, 1860	{ Division, July 8, 1851.
1004	Seymour, William H., assignor to self, D. S. Morgan, A. Palmer, and S. G. Williams.	Brockport, N. Y.	Reaping machines.	July 10, 1860	May 2, 1854.
1005	Seymour, William H., assignor to self, D. S. Morgan, A. Palmer, and S. G. Williams.	Brockport, N. Y.	Reaping machines.	July 10, 1860	Nov. 4, 1856.
1014	Shaw, Philander.	Boston, Mass.	Air engines	July 17, 1860	{ Division, Sept. 19, 1845; extended for seven years from and after Sept. 19, 1859.
968	Shaw, William F.	Boston, Mass.	Heating or cooking by gas	May 29, 1860	July 5, 1859.
907	Sickels, Frederick E.	New York, N. Y.	Engines, steam	Feb. 21, 1860	Sept. 20, 1859.
908	Sickels, Frederick E.	New York, N. Y.	Engines, steam	Feb. 21, 1860	Oct. 15, 1860.
909	Sickels, Frederick E.	New York, N. Y.	Engines, steam	Feb. 21, 1860	Nov. 13, 1860.
910	Sickels, Frederick E.	New York, N. Y.	Engines, steam	Feb. 21, 1860	
911	Sickels, Frederick E.	New York, N. Y.	Engines, steam	Feb. 21, 1860	
912	Sickels, Frederick E.	New York, N. Y.	Engines, steam	Feb. 21, 1860	
1059	Smith, Horace, and D. B. Wesson.	New York, N. Y.	Engines, steam	Feb. 21, 1860	
943	Smith, John Joseph Charles	Springfield, Mass.	Fire-arms, revolving	Oct. 9, 1860	
941	Snow, George K.	Philadelphia, Pa.	Matrices, mode of constructing	April 10, 1860	
1097	Somes, D. E., assignor to James S. Anderson.	Watertown, Mass.	Paper, machine for folding	April 3, 1860	
		Biddeford, Me.	Curing provisions	Dec. 11, 1860	

Alphabetical list of persons to whom patents have been reissued during the year 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date of reissue.	Date of original patent.
884	Howe, Tyler	Cambridgeport, Mass.	Bed bottoms	Jan. 17, 1860	June 13, 1854.
1074	Hufnagel, Bernhard	New York, N. Y.	Photographic baths	Nov. 13, 1860	Oct. 5, 1858.
939	Hurst, Abraham R.	Chambersburg, Pa.	Excavators, manure	April 3, 1860	Aug. 29, 1854.
917	Hussey, Obed	Baltimore, Md.	Reaping machines	Feb. 28, 1860	Aug. 7, 1847; reissued April 14, 1857; reissued June 21, 1859.
1098	James, Charles T.	Providence, R. I.	Projectiles	Dec. 11, 1860	Feb. 26, 1856.
995	Jane, Reuben	Otego, N. Y.	Boats, canal, attaching paddle wheels to	July 3, 1860	Nov. 24, 1857.
1096	Johnston, James J.	Allegheny, Pa.	Corn shellers	Dec. 11, 1860	April 19, 1859.
1048	Joslin, William	Cleveland, Ohio	Carriages, machinery for manufacturing	Sept. 25, 1860	Jan. 19, 1847.
989	Kakeles, Seligman	New York, N. Y.	Lenses, fluid	June 26, 1860	April 24, 1860.
959	Kidd, Whitten E.	New York, N. Y.	Bonnet frames	May 15, 1860	April 13, 1858.
960	Knoderer, Henry F. and Levi F.	Chillicothe, Ohio	Composition for preventing incrustation of steam boilers.	May 15, 1860	Jan. 3, 1860.
961	La Forge, Samuel	Cleveland, Ohio	Leather goods, water proof	May 15, 1860	Feb. 28, 1860.
931	Lefebvre, Louis	New Orleans, La.	Sugar juices, furnaces for evaporating	Mar. 20, 1860	Nov. 23, 1858; additional improvement Jan. 24, 1860.
1065	Lefebvre, Louis	New Orleans, La.	Boilers, steam	Oct. 16, 1860	May 3, 1859.
1044	Lester, Henry	Cincinnati, Ohio	Roofing composition	Sept. 18, 1860	Jan. 11, 1859.
1053	Lindner, Edward	New York, N. Y.	Fire-arms, breech loading	Oct. 2, 1860	Division, Mar. 29, 1859.
1054	Lindner, Edward	New York, N. Y.	Fire-arms, breech loading	Oct. 2, 1860	Feb. 22, 1859.
1026	Lowry, Joseph L.	Pittsburgh, Pa.	Fire plugs	Aug. 14, 1860	June 22, 1858.
1034	Mace, Alonzo M.	Springfield, Mass.	Lamps, vapor	Sept. 4, 1860	Oct. 23, 1858.
932	Mallerd, William	Bridgeport, Conn.	Gas regulators	Mar. 20, 1860	April 7, 1857.
935	Manny, Pells	Wadams' Grove, Ill.	Harvesters	May 27, 1860	July 26, 1859.
940	Marcher, Robert	New York, N. Y.	Enamelling mouldings, machines for	April 3, 1860	Dec. 11, 1849.
947	Marshall, Moses, assignor to George Crompton	Lowell, Mass.	Looms for weaving figured fabrics	April 24, 1860	Jan. 7, 1851; reissued July 26, 1859.
1029	Marston, Stanhope W., assignor to James M. Cooper	New York, N. Y.	Fire-arms, trigger operating revolving	Aug. 21, 1860	
887	Massey, William, assignor to C. L. Crowell and Robert Smith.	Greene County, Ill.	Iron bands, machine for contracting the circum- ference of wrought.	Jan. 24, 1860	Division, July 3, 1849.
888	Massey, William, assignor to C. L. Crowell and Robert Smith.	Greene County, Ill.	Iron bands, machine for contracting the circum- ference of wrought.	Jan. 24, 1860	
1090	Mayall, Thomas J., assignor to John H. Cheever	Roxbury, Mass.	Rubber, hard, manufacture of	Dec. 11, 1860	Nov. 30, 1858.
972	McCormick, L. J., W. S., and Cyrus H., assignors to C. H. McCormick.	Chicago, Ill.	Reaping and mowing machines	June 5, 1860	
973	McCormick, L. J., W. S., and Cyrus H., assignors to C. H. McCormick.	Chicago, Ill.	Reaping and mowing machines	June 5, 1860	Division, May 11, 1858.
974	McCormick, L. J., W. S., and Cyrus H., assignors to C. H. McCormick.	Chicago, Ill.	Reaping and mowing machines	June 5, 1860	
975	McCormick, Cyrus H.	Chicago, Ill.	Cutting grass, machines for	June 5, 1860	Division, Sept. 21, 1858.
976	McCormick, Cyrus H.	Chicago, Ill.	Cutting grass, machines for	June 5, 1860	
977	McCormick, Cyrus H.	Chicago, Ill.	Cutting grass, machines for	June 5, 1860	
927	McMannus, John	New York, N. Y.	Hats, ventilation of	Mar. 13, 1860	Jan. 3, 1860.
1080	McMunn, John B.	Port Jervis, N. Y.	Lubricating compound	Nov. 20, 1860	Jan. 3, 1860.

906	Mefford, David M.	Jeffersonville, Ind.	Corn huskers	May 15, 1860	Dec. 22, 1857.
892	Mershon, Ralph S., assignor to self and J. M. Harper	Philadelphia, Pa.	Time keepers, regulator for	Feb. 7, 1860	April 26, 1859.
885	Mitchell, Thomas	Lansingburg, N. Y.	Brush handles, hair, machine for finishing	Jan. 17, 1860	June 28, 1859.
990	Mitchell, Thomas	Lansingburg, N. Y.	Brush handles, hair, machine for finishing	June 26, 1860	June 28, 1859; reissued Jan. 17, 1860.
1062	{ Monroe, James F. and Edwin P., assignors to Edwin P. Monroe	New York, N. Y.	Egg beater	Oct. 16, 1860	April 19, 1859.
1099	Moore, Spencer	Fitchburg, Mass.	Threshing machines	Dec. 18, 1860	Oct. 3, 1854.
893	Nelson, Richard L.	Central Bridge, N. Y.	Life preservers to vests, mode of attaching	Feb. 7, 1860	Nov. 21, 1854.
998	Nesen, Joseph E., assignor to H. Baldwin, jr.	Ocala, Fla.	Harvesters and binders	July 3, 1860	{ Division, Aug. 27, 1853.
999	Nesen, Joseph E., assignor to H. Baldwin, jr.	Buffalo, N. Y.	Harvesters and binders	July 3, 1860	Nov. 1, 1859.
991	Neumann, Caesar	Buffalo, N. Y.	Skirts, skeleton hoop	June 26, 1860	Dec. 20, 1859.
1105	Newman, Carlton	New York, N. Y.	Cans, preserve	Dec. 18, 1860	Jan. 15, 1850.
1002	Norcross, Nicholas G	Birmingham, Pa.	Saw mills, circular	July 10, 1860	Nov. 2, 1858.
1068	Nyce, Benjamin M.	Lowell, Mass.	Refrigerator	Oct. 23, 1860	Aug. 19, 1856, reissued, Feb. 17, 1857.
933	Osborn, William, deceased, by Mary Jane Osborn, administratrix.	Kingston, Ind.	Bonnets and bonnet frames, machine for pressing.	Mar. 27, 1860	
894	Palmenberg, Joseph R.	Louisville, Ky.	Frame for ladies dresses	Feb. 7, 1860	{ Division, June 21, 1859.
996	Palser, Joseph W., and Gardner Howland.	New York, N. Y.	Paper pulp, apparatus for the manufacture of	July 3, 1860	June 7, 1859.
997	Palser, Joseph W., and Gardner Howland.	Fort Edward, N. Y.	Paper pulp, apparatus for the manufacture of	July 3, 1860	Sept. 28, 1858.
1056	Perkins, Edward L.	Fort Edward, N. Y.	Paper and other fabrics, machines for drying	Oct. 9, 1860	April 24, 1860.
1063	Pye, Thomas L.	Roxbury, Mass.	Locks	Oct. 16, 1860	Mar. 6, 1855.
1016	Rains, George W.	New York, N. Y.	Boilers, steam, feed water apparatus for	July 24, 1860	April 28, 1857.
1089	Reed, Jesse, assignor to Catharine M. Hunt.	Newburgh, N. Y.	Steering apparatus	Dec. 4, 1860	
920	Rice, Benjamin F., assignor to Charles H. Morgan, L. Whitney, jr., and T. Priest.	Marshfield, Mass.	Paper bags, machine for making	Mar. 6, 1860	
905	Robbins, Martin, and Jas. Powell, assignors to Jas. Powell.	Clinton, Mass.	Faucets	Feb. 21, 1860	Dec. 21, 1858.
1057	Rogers, John R.	Cincinnati, Ohio.	Seeders, percussion	Oct. 9, 1860	Mar. 6, 1860.
918	Roots, P. H.	Sacramento, Wis.	Water wheels	Feb. 28, 1860	Mar. 15, 1859.
906	Sampson, Blaney E., assignor to J. B. Proctor.	Connersville, Ind.	Cars, railroad, pole coupling for	Feb. 21, 1860	July 27, 1858.
936	Sanders, J. Milton	Boston, Mass.	Gas, production of illuminating	Mar. 27, 1860	July 27, 1858.
895	Sanford, N. C.	Cincinnati, Ohio.	Skates	Feb. 7, 1860	Feb. 20, 1855.
1075	Scarlett, William	Meriden, Conn.	Skates	Nov. 13, 1860	May 29, 1860.
1055	Seely, Samuel J., assignor to C. W. Durant.	Aurora, Ill.	Cars, railroad	Oct. 2, 1860	April 24, 1860.
1050	Sexton, B.	New York, N. Y.	Cloth, machinery for drying	Sept. 25, 1860	May 8, 1860.
1003	Seymour, William H., assignor to self, D. S. Morgan, A. Palmer, and S. G. Williams.	East Windsor, Conn.	Reaping machines	July 10, 1860	
1004	Seymour, William H., assignor to self, D. S. Morgan, A. Palmer, and S. G. Williams.	Brockport, N. Y.	Reaping machines	July 10, 1860	Division, July 8, 1851.
1005	Seymour, William H., assignor to self, D. S. Morgan, A. Palmer, and S. G. Williams.	Brockport, N. Y.	Reaping machines	July 10, 1860	
1014	Shaw, Philander.	Boston, Mass.	Air engines	July 17, 1860	May 2, 1854.
968	Shaw, William F.	Boston, Mass.	Heating or cooking by gas	May 29, 1860	Nov. 4, 1856.
907	Sickels, Frederick E.	New York, N. Y.	Engines, steam	Feb. 21, 1860	{ Division, Sept. 19, 1845; extended for seven years from and after Sept. 19, 1859.
908	Sickels, Frederick E.	New York, N. Y.	Engines, steam	Feb. 21, 1860	
909	Sickels, Frederick E.	New York, N. Y.	Engines, steam	Feb. 21, 1860	
910	Sickels, Frederick E.	New York, N. Y.	Engines, steam	Feb. 21, 1860	
911	Sickels, Frederick E.	New York, N. Y.	Engines, steam	Feb. 21, 1860	
912	Sickels, Frederick E.	New York, N. Y.	Engines, steam	Feb. 21, 1860	
1059	Smith, Horace, and D. B. Wesson.	New York, N. Y.	Fire-arms, revolving	Oct. 9, 1860	July 5, 1859.
943	Smith, John Joseph Charles	Springfield, Mass.	Matrices, mode of constructing	April 10, 1860	Sept. 20, 1859.
941	Snow, George K.	Philadelphia, Pa.	Paper, machine for folding	April 3, 1860	Oct. 15, 1860.
1097	Somes, D. E., assignor to James S. Anderson.	Watertown, Mass.	Curing provisions	Dec. 11, 1860	Nov. 13, 1860.

Alphabetical list of persons to whom patents have been reissued during the year 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date of reissue.	Date of original patent.
884	Howe, Tyler	Cambridgeport, Mass. . .	Bed bottoms	Jan. 17, 1860	June 13, 1854.
1074	Hufnagel, Bernhard	New York, N. Y.	Photographic baths	Nov. 13, 1860	Oct. 5, 1858.
939	Hurst, Abraham R.	Chambersburg, Pa.	Excavators, manure	April 3, 1860	Aug. 29, 1854.
917	Hussey, Obed	Baltimore, Md.	Reaping machines	Feb. 28, 1860	Aug. 7, 1847; reissued April 14, 1857; reissued June 21, 1859.
1098	James, Charles T.	Providence, R. I.	Projectiles	Dec. 11, 1860	Feb. 26, 1856.
995	Jane, Reuben	Otego, N. Y.	Boats, canal, attaching paddle wheels to	July 3, 1860	Nov. 24, 1857.
1096	Johnston, James J.	Allegheny, Pa.	Corn shellers	Dec. 11, 1860	April 19, 1859.
1048	Joslin, William	Cleveland, Ohio	Carriages, machinery for manufacturing	Sept. 25, 1860	Jan. 19, 1847.
989	Kakeles, Seligman	New York, N. Y.	Lenses, fluid	June 26, 1860	April 24, 1860.
959	Kidd, Whitten E.	New York, N. Y.	Bonnet frames	May 15, 1860	April 13, 1858.
960	Knoderer, Henry F. and Levi F.	Chillicothe, Ohio	Composition for preventing incrustation of steam boilers.	May 15, 1860	Jan. 3, 1860.
961	La Forge, Samuel	Cleveland, Ohio	Leather goods, water proof	May 15, 1860	Feb. 28, 1860.
931	Lefebvre, Louis	New Orleans, La.	Sugar juices, furnaces for evaporating	Mar. 20, 1860	Nov. 23, 1858; additional improvement Jan. 24, 1860.
1065	Lefebvre, Louis	New Orleans, La.	Boilers, steam	Oct. 16, 1860	May 3, 1859.
1044	Lester, Henry	Cincinnati, Ohio	Roofing composition	Sept. 18, 1860	Jan. 11, 1859.
1053	Lindner, Edward	New York, N. Y.	Fire-arms, breech loading	Oct. 2, 1860	Division, Mar. 29, 1859.
1054	Lindner, Edward	New York, N. Y.	Fire-arms, breech loading	Oct. 2, 1860	Feb. 22, 1859.
1026	Lowry, Joseph L.	Pittsburgh, Pa.	Fire plugs	Aug. 14, 1860	June 22, 1858.
1034	Mace, Alonzo M.	Springfield, Mass. . .	Lamps, vapor	Sept. 4, 1860	Oct. 23, 1858.
932	Mallard, William	Bridgport, Conn.	Gas regulators	Mar. 20, 1860	April 7, 1857.
935	Manny, Pells	Wadams' Grove, Ill. . .	Harvesters	May 27, 1860	July 26, 1859.
940	Marcher, Robert	New York, N. Y.	Enamelling mouldings, machines for	April 3, 1860	Dec. 11, 1849.
947	Marshall, Moses, assignor to George Crompton	Lowell, Mass.	Looms for weaving figured fabrics	April 24, 1860	Jan. 7, 1851; reissued July 26, 1859.
1029	Marston, Stanhope W., assignor to James M. Cooper	New York, N. Y.	Fire-arms, trigger operating revolving	Aug. 21, 1860	Division, July 3, 1849.
887	Massey, William, assignor to C. L. Crowell and Robert Smith.	Greene County, Ill.	Iron bands, machine for contracting the circum- ference of wrought.	Jan. 24, 1860	Nov. 30, 1858.
888	Massey, William, assignor to C. L. Crowell and Robert Smith.	Greene County, Ill.	Iron bands, machine for contracting the circum- ference of wrought.	Jan. 24, 1860	Division, May 11, 1858.
1090	Mayall, Thomas J., assignor to John H. Cheever	Roxbury, Mass.	Rubber, hard, manufacture of	Dec. 11, 1860	Division, Sept. 21, 1858.
972	McCormick, L. J., W. S., and Cyrus H., assignors to C. H. McCormick.	Chicago, Ill.	Reaping and mowing machines	June 5, 1860	Jan. 3, 1860.
973	McCormick, L. J., W. S., and Cyrus H., assignors to C. H. McCormick.	Chicago, Ill.	Reaping and mowing machines	June 5, 1860	Jan. 3, 1860.
974	McCormick, L. J., W. S., and Cyrus H., assignors to C. H. McCormick.	Chicago, Ill.	Reaping and mowing machines	June 5, 1860	Jan. 3, 1860.
975	McCormick, Cyrus H.	Chicago, Ill.	Cutting grass, machines for	June 5, 1860	Jan. 3, 1860.
976	McCormick, Cyrus H.	Chicago, Ill.	Cutting grass, machines for	June 5, 1860	Jan. 3, 1860.
977	McCormick, Cyrus H.	Chicago, Ill.	Cutting grass, machines for	June 5, 1860	Jan. 3, 1860.
927	McMannus, John	New York, N. Y.	Hats, ventilation of	Mar. 13, 1860	Jan. 3, 1860.
1080	McMunn, John B.	Port Jervis, N. Y.	Lubricating compound	Nov. 20, 1860	Jan. 3, 1860.

296	Mefford, David M.	Jeffersonville, Ind.	Corn huskers	May 15, 1860	Dec. 22, 1857.
892	Mershon, Ralph S., assignor to self and J. M. Harper	Philadelphia, Pa.	Time keepers, regulator for	Feb. 7, 1860	April 26, 1859.
885	Mitchell, Thomas	Lansingburg, N. Y.	Brush handles, hair, machine for finishing	Jan. 17, 1860	June 28, 1859.
990	Mitchell, Thomas	Lansingburg, N. Y.	Brush handles, hair, machine for finishing	June 26, 1860	June 28, 1859; reissued Jan. 17, 1860.
1062	{ Monroe, James F. and Edwin P., assignors to Edwin P. Monroe	New York, N. Y.	Egg beater	Oct. 16, 1860	April 19, 1859.
1099	Moore, Spencer	Fitchburg, Mass.	Threshing machines	Dec. 18, 1860	Oct. 3, 1854.
893	Nelson, Richard L.	Central Bridge, N. Y.	Life preservers to vests, mode of attaching	Feb. 7, 1860	Nov. 21, 1854.
998	Nesen, Joseph E., assignor to H. Baldwin, jr.	Ocala, Fla.	Harvesters and binders	July 3, 1860	{ Division, Aug. 27, 1853.
999	Nesen, Joseph E., assignor to H. Baldwin, jr.	Buffalo, N. Y.	Harvesters and binders	July 3, 1860	Nov. 1, 1859.
991	Neumann, Caesar	Buffalo, N. Y.	Skirts, skeleton hoop	June 26, 1860	Dec. 20, 1859.
1105	Newman, Carlton	New York, N. Y.	Cans, preserve	Dec. 18, 1860	Jan. 15, 1850.
1002	Norcross, Nicholas G.	Birmingham, Pa.	Saw mills, circular	July 10, 1860	Nov. 2, 1858.
1068	Nyce, Benjamin M.	Lowell, Mass.	Refrigerator	Oct. 23, 1860	Aug. 19, 1856, reissued, Feb. 17, 1857.
933	Osborn, William, deceased, by Mary Jane Osborn, administratrix	Kingston, Ind.	Bonnets and bonnet frames, machine for pressing	Mar. 27, 1860	Jan. 10, 1860.
894	Palmenberg, Joseph R.	Louisville, Ky.	Frame for ladies dresses	Feb. 7, 1860	{ Division, June 21, 1859.
996	Palser, Joseph W., and Gardner Howland	New York, N. Y.	Paper pulp, apparatus for the manufacture of	July 3, 1860	June 7, 1859.
997	Palser, Joseph W., and Gardner Howland	Fort Edward, N. Y.	Paper pulp, apparatus for the manufacture of	July 3, 1860	Sept. 28, 1858.
1056	Perkins, Edward L.	Fort Edward, N. Y.	Paper and other fabrics, machines for drying	Oct. 9, 1860	April 24, 1860.
1063	Pye, Thomas L.	Roxbury, Mass.	Locks	Oct. 16, 1860	Mar. 6, 1855.
1016	Rains, George W.	New York, N. Y.	Boilers, steam, feed water apparatus for	July 24, 1860	April 28, 1857.
1089	Reed, Jesse, assignor to Catharine M. Hunt	Newburgh, N. Y.	Steering apparatus	Dec. 4, 1860	
920	Rice, Benjamin F., assignor to Charles H. Morgan, L. Whitney, jr., and T. Priest	Marshfield, Mass.	Paper bags, machine for making	Mar. 6, 1860	
905	Robbins, Martin, and Jas. Powell, assignors to Jas. Powell	Clinton, Mass.	Faucets	Feb. 21, 1860	Dec. 21, 1858.
1057	Rogers, John R.	Cincinnati, Ohio	Seeders, percussion	Oct. 9, 1860	Mar. 6, 1860.
918	Roots, P. H.	Sacramento, Wis.	Water wheels	Feb. 28, 1860	Mar. 15, 1859.
906	Sampson, Blaney E., assignor to J. B. Proctor	Connersville, Ind.	Cars, railroad, pole coupling for	Feb. 21, 1860	July 27, 1858.
936	Sanders, J. Milton	Boston, Mass.	Gas, production of illuminating	Mar. 27, 1860	July 27, 1858.
895	Sanford, N. C.	Cincinnati, Ohio	Skates	Feb. 7, 1860	Feb. 20, 1855.
1075	Scarlett, William	Meriden, Conn.	Skates	Nov. 13, 1860	May 29, 1860.
1055	Seely, Samuel J., assignor to C. W. Durant	Aurora, Ill.	Cars, railroad	Oct. 2, 1860	April 24, 1860.
1050	Sexton, B.	New York, N. Y.	Cloth, machinery for drying	Sept. 25, 1860	May 8, 1860.
1003	Seymour, William H., assignor to self, D. S. Morgan, A. Palmer, and S. G. Williams	East Windsor, Conn.	Reaping machines	July 10, 1860	
1004	Seymour, William H., assignor to self, D. S. Morgan, A. Palmer, and S. G. Williams	Brockport, N. Y.	Reaping machines	July 10, 1860	Division, July 8, 1851.
1005	Seymour, William H., assignor to self, D. S. Morgan, A. Palmer, and S. G. Williams	Brockport, N. Y.	Reaping machines	July 10, 1860	
1014	Shaw, Philander	Boston, Mass.	Air engines	July 17, 1860	May 2, 1854.
968	Shaw, William F.	Boston, Mass.	Heating or cooking by gas	May 29, 1860	Nov. 4, 1856.
907	Sickels, Frederick E.	New York, N. Y.	Engines, steam	Feb. 21, 1860	Division, Sept. 19, 1845; extended for seven years from and after Sept. 19, 1859.
908	Sickels, Frederick E.	New York, N. Y.	Engines, steam	Feb. 21, 1860	
909	Sickels, Frederick E.	New York, N. Y.	Engines, steam	Feb. 21, 1860	
910	Sickels, Frederick E.	New York, N. Y.	Engines, steam	Feb. 21, 1860	
911	Sickels, Frederick E.	New York, N. Y.	Engines, steam	Feb. 21, 1860	
912	Sickels, Frederick E.	New York, N. Y.	Engines, steam	Feb. 21, 1860	
1059	Smith, Horace, and D. B. Wesson	New York, N. Y.	Engines, steam	Feb. 21, 1860	
943	Smith, John Joseph Charles	Springfield, Mass.	Fire-arms, revolving	Oct. 9, 1860	July 5, 1859.
941	Snow, George K.	Philadelphia, Pa.	Matrices, mode of constructing	April 10, 1860	Sept. 20, 1859.
1097	Somes, D. E., assignor to James S. Anderson	Watertown, Mass.	Paper, machine for folding	April 3, 1860	Oct. 15, 1860.
		Biddeford, Me.	Curling provisions	Dec. 11, 1860	Nov. 13, 1860.

Alphabetical list of persons to whom patents have been reissued during the year 1860.

No.	Name of patentee.	Residence.	Invention or discovery.	Date of reissue.	Date of original patent.
1049	Southworth, Albert S.	Boston, Mass.	Cameras, plate holder for.	Sept. 25, 1860	April 10, 1855.
944	Stanley, Henry, assignor to Charles Eddy and Jacob Shaver.	Poultney, Vt.	Stoves, coal	April 10, 1860	January 4, 1845; extended for seven years from and Jan. 4, 1859.
958	Stanley, Henry, assignor to Charles Eddy and Jacob Shaver.	Poultney, Vt.	Stoves, coal	May 8, 1860	January 4, 1845; extended for seven years from and after Jan. 4, 1859; reissued April 10, 1860.
1078	Stanley, Henry, assignor to Charles Eddy and Jacob Shaver.	Troy, N. Y.	Stoves, coal	Nov. 13, 1860	January 4, 1845; extended for seven years from and after Jan. 4, 1859; reissued April 10, 1860; reissued May 8, 1860.
985	Steadman, Thomas S., assignor to W. N. Whiteley, jr.	Murray, N. Y.	Harvesters, clover and grass seed	June 19, 1860	} Division, May 23, 1854. May 25, 1858.
986	Steadman, Thomas S., assignor to W. N. Whiteley, jr.	Murray, N. Y.	Harvesters, clover and grass seed	June 19, 1860	
987	Steadman, Thomas S., assignor to W. N. Whiteley, jr.	Murray, N. Y.	Harvesters, clover and grass seed	June 19, 1860	
1104	St. John, J. A., assignor to D. S. Morgan, assignor to W. H. Seymour, D. S. Morgan, S. G. Williams, and A. Palmer.	Janesville, Wis.	Harvesters, raking attachment for	Dec. 18, 1860	
956	Stimpson, H. H.	Boston, Mass.	Ranges, cooking	May 1, 1860	April 5, 1859.
1042	Stoddard, J. C.	Worcester, Mass.	Hay making machines	Sept. 6, 1860	Dec. 11, 1859.
974	Swartz, Jacob	Buffalo, N. Y.	Harvesters, grain and grass	June 5, 1860	Nov. 14, 1854.
886	Tambling, William H.	Berlin, Wis.	Washing machine	Jan. 17, 1860	Oct. 11, 1859.
1030	Taylor, Alva B., assignor to Henry A. Burr.	New York, N. Y.	Hat bodies, machinery for making	Aug. 21, 1860	Mar. 18, 1856.
957	Titus, S. H., and O. Des Granges.	St. Louis, Mo.	Pavement, cellular iron	May 1, 1860	Oct. 13, 1857.
948	Tompkins, Clark	Troy, N. Y.	Knitting machines	April 24, 1860	Dec. 23, 1856.
963	Tompkins, Clark, and John Johnson.	Troy, N. Y.	Knitting machines	May 15, 1860	Sept. 18, 1855.
928	Towne, Lauriston	Providence, R. I.	Chain machine	Mar. 13, 1860	Oct. 20, 1857.
1051	Travis, Nathan C., Nathan Johnson, and Richard Emerson.	Alton, Ill.	Valve for steam engines, regulator	Sept. 25, 1860	Oct. 11, 1859.
988	Trotter, Jonathan T.	New York, N. Y.	India rubber, vulcanizing	June 19, 1860	Dec. 3, 1859.
1081	Trumbull, Horace	Jersey City, N. J.	Glass, flint, manufacture of	Nov. 20, 1860	July 3, 1860.
1076	Tyler, Samuel W.	Greenwich, N. Y.	Harvesters	Nov. 13, 1860	Jan. 26, 1858.
929	Ulmer, Philip	New York, N. Y.	Bed bottom, spring	Mar. 13, 1860	Oct. 4, 1859.
882	Urmey, Jesse	Wilmington, Del.	Harvesters, grain and grass	Jan. 3, 1860	} Division, July 24, 1855.
883	Urmey, Jesse, assignor to David M. Osborne.	Wilmington, Del.	Harvesters, grain and grass	Jan. 3, 1860	
1100	Van Anden, William	Poughkeepsie, N. Y.	Copying apparatus, portable	Dec. 18, 1860	Sept. 7, 1858.
1006	Van De Mark, Charles	Oaks Corners, N. Y.	Fences, portable, method of uniting the panels of.	July 10, 1860	June 2, 1857.
1052	Van Dyke, Augustus	Greenupsburg, Ky.	Ores, heating	Oct. 2, 1860	April 24, 1860.
1069	Van Steenburgh, Hiram, and Joel Egnor, assignors to themselves and Peter Baurhyte.	Catskill, N. Y.	Hoisting and storing ice, apparatus for	Oct. 23, 1860	Nov. 30, 1858.
930	Wagener, D. S.	Penn Yan, N. Y.	Mills, flouring	Mar. 13, 1860	Sept. 25, 1855.
1086	Wells, Henry A., deceased, Eliza Wells, administratrix of, assignor to Henry A. Burr.	New York, N. Y.	Hat bodies, machinery for making	Dec. 4, 1860	} Division, Apr. 25, 1846; reissued Sept. 30, '56; extended for 7 years from and after April 25, 1860.
1087	Wells, Henry A., deceased, Eliza Wells, administratrix of, assignor to Henry A. Burr.	New York, N. Y.	Hat bodies, manufacturing	Dec. 4, 1860	

900	Westinghouse, George	Schenectady, N. Y.	Horse power, endless chain	Feb. 14, 1860	June 13, 1854; reissued July 10, 1855.
942	Wharton, William, Jr.	Philadelphia, Pa.	Railroads, dispensing with switches on	April 3, 1860	Dec. 13, 1859.
1064	Wheeler, Calvin D.	Bridgeport, Conn.	Needle case and index	Oct. 16, 1860	May 17, 1859.
971	Wheeler, Cyrenus, Jr.	Poplar Ridge, N. Y.	Harvesters, grain and grass	June 5, 1860	Feb. 6, 1855.
875	Wheeler, Cyrenus, Jr.	Poplar Ridge, N. Y.	Harvesters, grain and grass	Jan. 3, 1860	Division, Dec. 5, 1854.
876	Wheeler, Cyrenus, Jr.	Poplar Ridge, N. Y.	Harvesters, grain and grass	Jan. 3, 1860	
877	Wheeler, Cyrenus, Jr.	Poplar Ridge, N. Y.	Harvesters, grain and grass	Jan. 3, 1860	
878	Wheeler, Cyrenus, Jr.	Poplar Ridge, N. Y.	Harvesters, grain and grass	Jan. 3, 1860	
879	Wheeler, Cyrenus, Jr.	Poplar Ridge, N. Y.	Harvesters, grain and grass	Jan. 3, 1860	
880	Wheeler, Cyrenus, Jr.	Poplar Ridge, N. Y.	Harvesters, grain and grass	Jan. 3, 1860	Aug. 3, 1858.
881	Wheeler, Cyrenus, Jr.	Poplar Ridge, N. Y.	Harvesters, grain and grass	Jan. 3, 1860	
1043	Wheeler, Eli	Elmira, N. Y.	Cars for railroads, sleeping	Sept. 18, 1860	Jan. 17, 1860.
1028	Wheeler, John W.	Cleveland, Ohio	Water from wells, method of elevating and delivering	Aug. 21, 1860	
896	Whitaker, John T., and Calvin D. Read	St. Charles, Ill.	Reaping and mowing machines	Feb. 14, 1860	Division, Aug. 11, 1857.
897	Whitaker, John T., and Calvin D. Read	St. Charles, Ill.	Reaping and mowing machines	Feb. 14, 1860	
898	Whitaker, John T., and Calvin D. Read	St. Charles, Ill.	Reaping and mowing machines	Feb. 14, 1860	
899	Whitaker, John T., and Calvin D. Read	St. Charles, Ill.	Reaping and mowing machines	Feb. 14, 1860	
965	White, Lewis, assignor to S. S. Putnam & Co.	Hartford, Conn.	Curtain fixtures	May 22, 1860	
1060	Whittemore, Amos	Cambridgeport, Mass.	Nails, horse shoe, machine for making	Oct. 9, 1860	Division, June 2, 1857.
1101	Wickersham, John B.	Brooklyn, N. Y.	Bedstead, folding	Dec. 18, 1860	
1102	Wickersham, John B.	Brooklyn, N. Y.	Bedstead, folding	Dec. 18, 1860	March 6, 1860.
1023	Wight, Henry, assignor to William C. McClallan	Cambridge, Mass.	Shoes, wooden-soled	Aug. 7, 1860	
1082	Wilcox, Stephen, Jr.	Westerly, R. I.	Air engines	Nov. 20, 1860	Division, May 3, 1859.
1083	Wilcox, Stephen, Jr.	Westerly, R. I.	Air engines	Nov. 20, 1860	
1025	Wilhelm, Charles, and Anna C.	Philadelphia, Pa.	Lamp shades	Aug. 14, 1860	May 3, 1859.
984	Williams, Turner, assignor to self and David Heaton, 2d	Providence, R. I.	Window stop	June 12, 1860	
913	Wilson, Allen B., assignor to Wheeler and Wilson Manufacturing Company	Waterbury, Conn.	Stitches by machinery, process of forming	Feb. 28, 1860	Division, Aug. 12, 1851.
914	Wilson, Allen B., assignor to Wheeler and Wilson Manufacturing Company	Waterbury, Conn.	Stitches by machinery, process of forming	Feb. 28, 1860	
964	Wilson, John P., and John F. Thomas, assignors to Wilson Manufacturing Company	Frankfort, N. Y.	Burglar's alarm	May 22, 1860	Feb. 8, 1859.
982	Wyberd, John	New York, N. Y.	Reflector, night light	June 12, 1860	

ALPHABETICAL LIST OF PATENTEES TO WHOM ADDITIONAL IMPROVEMENTS WERE GRANTED DURING THE YEAR 1860.

No.	Names.	Residence.	Invention.	Date of imp't.	Date of original patent.
272	Anderson, Alban.	Lancaster, Ohio	Engines, steam, governor for	Mar. 20, 1860	Aug. 3, 1858.
270	Angamar, E. H.	New Orleans, La.	Wharves, piers, &c., mode of staying piles for ..	Mar. 6, 1860	July 12, 1859; reissued Mar. 6, 1860.
295	Banks, William C.	Como Depot, Miss.	Planters, corn	Sept. 4, 1860	May 1, 1860.
293	Bauder, Michael L.	Cleveland, Ohio	Churn	Aug. 7, 1860	Jan. 19, 1858.
284	Briggs, B. B.	Sharon, Ohio	Tile, drain, apparatus for laying	June 26, 1860	Oct. 4, 1859.
261	Brush, Addison G.	Great Bend, Pa.	Churns, operating	Jan. 10, 1860	June 15, 1858.
274	Cartwright, Robert	Ithaca, N. Y.	Boat propellers, canal	April 3, 1860	July 19, 1859.

Alphabetical list of patentees to whom additional improvements were granted during the year 1860.

No.	Names.	Residence.	Invention.	Date of imp't.	Date of original patent.
307	Chase, Thomas G.	Philadelphia, Pa.	Fabrics incorrodible, rendering.	Dec. 11, 1860	Nov. 9, 1858.
266	Costello, Thomas P.	Buffalo, N. Y.	Skate fastening.	Feb. 28, 1860	Dec. 6, 1859.
271	Cowles, Norman, and Abijah Hulbert.	Edgefield, S. C.	Carriage seats, spring back.	Mar. 13, 1860	Oct. 11, 1859.
282	Dickey, Julius C.	Saratoga, N. Y.	Quartz, machinery for crushing.	June 12, 1860	May 8, 1860.
290	Edson, William F.	Philadelphia, Pa.	Shoe heels, machine for cutting and finishing.	July 24, 1860	Sept. 6, 1859.
265	Ells, Josiah, assignor to James M. Cooper and William S. Lavelly.	Pittsburgh, Pa.	Fire-arms, revolving.	Feb. 21, 1860	Aug. 1, 1854; reissued Sept. 6, 1859.
298	Elmer, D. F.	Haydenville, Mass.	Watch key and guard bar.	Oct. 2, 1860	June 26, 1860.
275	Emerson, James.	Boston, Mass.	Windlasses, ships.	April 3, 1860	Aug. 28, 1855.
268	Evarts, Harry H., assignor to self and P. E. Merrihew.	Chicago, Ill.	Sawing staves from the bolt, machine for.	Mar. 6, 1860	May 17, 1859.
276	Gatchell, H. P., assignor to E. J. Bates.	Ravenna, Ohio.	Pots, coffee.	April 3, 1860	Nov. 22, 1859.
294	Geiger, Albertus.	Dayton, Ohio.	Lamps, vapor.	Aug. 14, 1860	May 29, 1860.
303	Glover, Amos.	Powhatan Point, Ohio.	Corn crushers.	Nov. 20, 1860	June 5, 1860.
277	Gore, John.	Battleboro', Vt., formerly of Fredonia.	Harvester cutters.	April 10, 1860	Feb. 16, 1858.
279	Gregg, Mahlon.	Philadelphia, Pa.	Tenons on spokes, machine for cutting.	May 15, 1860	Feb. 9, 1858.
269	Huston, John.	Ottawa, Ill.	Seeding machines.	Mar. 6, 1860	Jan. 19, 1858.
309	Johnson, Frank G.	Brooklyn, N. Y.	Composition to prevent the depredation of insects	Dec. 18, 1860	March 27, 1860.
299	Johnson, William H.	Richmond, Ark.	Ploughs.	Oct. 2, 1860	Feb. 14, 1860.
296	Jolly, Thomas J.	Olean, Ind.	Hay, machines for loading.	Sept. 4, 1860	June 26, 1860.
285	Jones, Daniel.	Boston, Mass.	Steering apparatus.	June 26, 1860	Feb. 21, 1860.
297	Kingsbury, G. J.	Rochester, N. Y.	Stoves.	Sept. 18, 1860	April 12, 1859.
302	Laidley, Theodore T. S.	United States Army.	Fire-arms, tape primer for.	Oct. 9, 1860	Feb. 15, 1859.
263	Lefebvre, Louis.	New Orleans, La.	Sugar juices, furnaces for evaporating.	Jan. 24, 1860	Nov. 23, 1858.
280	Lyman, Josiah.	Lennox, Mass.	Protractor.	May 15, 1860	May 25, 1858.
300	McEnally, J. B.	Clearfield, Pa.	Paper and letter file.	Oct. 2, 1860	Feb. 28, 1860.
278	Newbury, Frederick D.	Albany, N. Y.	Fire-arms, revolving.	May 1, 1860	June 12, 1855.
291	Overocker, Anthony.	McHenry, Ill.	Huller, clover.	July 24, 1860	July 5, 1859.
301	Parkhurst, George T.	Baltimore, Md.	Lamps.	Oct. 2, 1860	Sept. 13, 1859.
281	Pendleton, Charity.	Galena, Ill.	Washing machine.	May 29, 1860	July 12, 1859.
273	Pond, Joseph F.	Cleveland, Ohio.	Washing machine.	Mar. 27, 1860	Oct. 26, 1858.
264	Quern, Edmond.	New York, N. Y.	Oils, gelatinizing.	Jan. 24, 1860	Aug. 30, 1859.
267	Race, Washburne.	Seneca Falls, N. Y.	Pump packings.	Feb. 28, 1860	Nov. 24, 1857.
262	Richardson, Sylvanus.	Jericho, Vt.	Water wheel.	Jan. 17, 1860	May 17, 1859.
304	Robertson, Henry H.	Kingston, Mo.	Ploughs.	Nov. 27, 1860	July 10, 1860.
308	Sadier, James.	Egremont, Mass.	Thills to axles, coupling for.	Dec. 18, 1860	July 24, 1860.
286	Shrote, John H.	Baltimore, Md.	Cakes, cutting and panning.	June 26, 1860	Oct. 11, 1859.
305	Sims, William.	New York, N. Y.	Refrigerator.	Dec. 4, 1860	Feb. 8, 1859.
287	Smith, Elisha M., assignor to self and Elbridge G. Mayhew.	Indianapolis, Ind.	Moulding machines.	June 26, 1860	Feb. 21, 1860.
288	Tiberi, Joseph.	St. Louis, Mo.	Grates.	July 17, 1860	Sept. 6, 1859.
283	Whitman, Thomas Spurr.	New York, N. Y.	Skates to boots, attaching.	June 19, 1860	Dec. 20, 1859.
306	Wilkinson, Asbury.	Shelbyville, Ind.	Washing machines.	Dec. 4, 1860	Sept. 20, 1859.
292	Winslow, A. P.	Cleveland, Ohio.	Railroad cars, roofs for.	July 31, 1860	Aug. 9, 1859.
289	Yeiser, Frederick.	Indianapolis, Ind.	Altitudes of the sun, instrument for taking.	July 17, 1860	Feb. 8, 1859.

ALPHABETICAL LIST OF PATENTEES WHOSE PATENTS WERE EXTENDED DURING THE YEAR 1860.

Names.	Residence.	Invention.	Date of patent.
Butterworth, Joshua H.....	Indianapolis, Ind.....	Locks, door.....	April 11, 1846.
Carmichael, D., deceased, by E. Carmichael, surviving administratrix, and J. C. Osgood.	Brooklyn, N. Y.....	Dredging machine..	May 30, 1846.
Carey, Daniel, deceased, by his executors, Norman Shelton and Jane Carey.	Clarkson, N. Y.....	Horse power.....	June 27, 1846.
Dutcher, Warren W.....	Millford, Mass.....	Looms.....	June 27, 1846.
Fosket, William.....	Meriden, Conn.....	Hat bodies, machinery for making.....	Jan. 23, 1846.
Garsed, Richard.....	Franklin, Pa.....	Looms for tweeling, operating treadle cams in.....	July 20, 1846.
Granger, R. D.....	Albany, N. Y.....	Stoves, cooking.....	June 13, 1846.
Gwynne, James S.....	New York, N. Y., formerly of Pittsburgh, Pa.	Acids, separating olein and stearic.....	Sept. 3, 1846.
Harvey, Hayward A., administrator of Thomas W. Harvey..	New York, N. Y.....	Screw heads, machine for dressing.....	Aug. 18, 1846.
Harvey, Hayward A., administrator of Thomas W. Harvey..	New York, N. Y.....	Screws, machine for cutting.....	May 30, 1846; reissued Dec. 28, 1858.
House, Royal E.....	Binghamton, N. Y.....	Telegraph, magnetic printing.....	April 18, 1846; reissued Sept. 20, 1859.
Howe, Elias, jr.....	Brooklyn, N. Y.....	Sewing machines.....	Sept. 10, 1846.
Howe, William, deceased, by Joseph Stone, administrator..	Springfield, Mass.....	Bridges, truss.....	Aug. 28, 1846.
Judson, A., and.....	Rochester, N. Y.....	Telegraph bell.....	Oct. 17, 1846; reissued Dec. 26, 1848.
Jackson, E. N., administratrix of T. D. Jackson, deceased..	New York, N. Y.....	Telegraph, bell.....	Oct. 17, 1846; reissued Dec. 26, 1848.
Judson, Alfred, and.....	Rochester, N. Y.....	Stoves.....	Sept. 5, 1846.
Elizabeth N. Jackson, adm'x of Timothy D. Jackson, dec'd..	New York, N. Y.....	Ploughs.....	May 2, 1846.
Latrobe, John H. B.....	Baltimore, Md.....	Netting machine.....	June 27, 1846.
May, John M.....	Janesville, Wis.....	Screw machines, feeders of.....	Mar. 7, 1846; reissued May 7, 1850.
McMullen, John.....	Baltimore, Md.....	Telegraph, electro-magnetic.....	April 11, 1846; reissued June 13, 1848.
Merrick, Solyman, deceased, by A. D. Briggs, administrator.	Springfield, Mass.....	Leg, artificial.....	Nov. 4, 1846.
Morse, Samuel F. B.....	Poughkeepsie, N. Y.....	Stoves, registers for.....	April 4, 1846.
Palmer, Benjamin F.....	Philadelphia, Pa.....	Kettles, tea.....	Mar. 14, 1846.
Race, Washburn.....	Seneca Falls, N. Y.....	Screws, wood.....	Aug. 20, 1846; reissued Feb. 22, 1848; reissued Nov. 23, 1858.
Ripley, Ezra.....	Troy, N. Y.....	Sugar pans.....	May 16, 1846.
Sloan, Thomas J., assignor to Eagle Screw Company.....	New York, N. Y.....	Printing presses, checking the momentum of.....	April 4, 1846.
Stillman, Alfred, deceased, by Elizabeth A. Harris, admr'x..	New York, N. Y.....	Hat bodies, machinery for making.....	April 25, 1846; reissued Sept. 30, 1856; reissued October 7, 1856.
Taylor, Alva B.....	Newark, N. J.....		
Wells, Eliza, administratrix of Henry A. Wells, deceased...	New York, N. Y.....		

Alphabetical list of patentees whose patents were extended during the year 1860.

Names.	Residence.	Invention or discovery.	Date of patent.
Wells, Eliza, administratrix of Henry A. Wells, deceased...	New York, N. Y.....	Hat bodies, manufacturing.....	April 25, 1846; see next above.
Wells, Thomas J.....	New York, N. Y.....	Saw mills.....	Mar. 14, 1846.
Wheeler, William.....	New Britain, Conn.....	Curry combs.....	April 25, 1846.

LIST OF DISCLAIMERS ENTERED DURING THE YEAR 1860.

Name of patentee.	Residence.	Invention or design.	Date of disclaimer.	Date of original patent.
Burr, Henry A. (See Hopkins, Lansing E., assignor.)	Clark County, Ohio.....	Reaping machine.....	Nov. 3, 1860.	Nov. 20, 1846.
Cook, Andrew J.....	New York, N. Y.....	Hat bodies, machinery for manufacturing.....	Sep. 15, 1860.	Dec. 21, 1852.
Hopkins, Lansing E., assignor to H. A. Burr.....	New York, N. Y.....	Engines, fire, applying water to.....	Sep. 25, 1860.	Feb. 13, 1841.
Ransom, Franklin, and Uzziiah Wenman.....				

DESCRIPTIONS AND CLAIMS OF PATENTS

ISSUED IN THE YEAR 1860.

ILLUSTRATED WITH ENGRAVINGS.

No. 26,642.—ALEXANDER ANABLE, of Middlesex, N. Y.—*Improvement in Corn Planters*.—Patent dated January 3, 1860.—The cog wheel *d* has its teeth cut away on two or more planes, forming intermediate spaces *d*¹, so that the cam *c*, together with the shaft *a* and dropping rollers, is allowed to fly back by the action of the spring *b*, whenever one of the intermediate spaces *d*¹ comes opposite the cam. By this means a continuous rotary motion can be given to the cog wheel *d*, and still the dropping rollers are caused to receive seed and discharge the same at the proper intervals.

Claim.—The arrangement of the cog wheel *d*, with intermediate spaces *d*¹, in combination with the cam *c*, spring *b*, and seed-dropping rollers *E*, substantially as and for the purposes specified.

No. 26,643.—JOSEPH K. ANDREWS, of Antrim, Ohio.—*Improved Combination of Seat and Cane*.—Patent dated January 3, 1860.—*a* represents the legs into which the main body of the cane divides when used as a seat; *b*, the three pointed centre pin upon which the legs of the cane work; *c*, the canvas seat; *d*, a pin fastened from the centre of the under side of the seat; *e*, the hollow cap, which gives a finish to the cane, and conceals the seat; *f*, the ferrule; and *g*, a spring for holding fast the ferrule.

Claim.—The cane as constructed for the purposes of a cane and seat, operating as described and for the purposes set forth.

No. 26,644.—JOHN A. BASSETT, of Salem, Mass.—*Improvement in the Manufacture of Hydro-carbon Gas*.—Patent dated January 3, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The continuous manufacture of an illuminating gas, by carrying the hydrogen and the vapor of a liquid hydro-carbon, formed in the manner described, through a retort which is intensely heated, for the purpose of producing a permanent illuminating gas.

No. 26,645.—JAMES E. BOYLE, of Brooklyn, N. Y.—*Improvement in Valves for Water Closets*.—Patent dated January 3, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Combining with the body of the cock provided with the discharge pipe or nozzle, and having its cylindrical bore surrounded by an induction pipe, forming a surrounding chamber, with apertures in its bore for the admission of water, as described, three piston valves on a movable stem, one above the discharge pipe and the other two below it, and bearing the relations to the series of apertures from the cylindrical bore in which they work to the surrounding supply chamber, substantially such as described.

No. 26,646.—PAUL BOYNTON, of Canton, N. Y.—*Improvement in Magazine Fire Arms*.—Patent dated January 3, 1860.—*G* is a sliding charger placed at the base and between the barrel and tube *D*, having a hole corresponding to the size of the bore of the barrel, and likewise to the hole at the base of the powder magazine *F*, and also to an outlet in the cam *B* into the chamber *H*.

The inventor says: I *claim* the sliding charger *G*, when used for the purpose and in the manner substantially as specified.

I also claim the method of loading by revolving the barrel and magazine, substantially as described in the specifications.

And also the method of loading by means of the charger *G*, and magazines *F* and *D*, in combination, substantially as described and set forth in the specifications.

No. 26,647.—THOMAS H. BURLEY, of New York, N. Y.—*Improvement in Dovetailing Machines*.—Patent dated January 3, 1860.—The front edge of the bed E is recessed at *h*, in order to allow the cutters *c* to pass through and permit the bed to support the work while acted on by the cutters *c*.

Claim.—The employment or use of the rotary cutter *c*, in connection with the rising and falling tilting bed E, arranged substantially as and for the purpose set forth.

No. 29,648.—LEVI BURNELL, of Milwaukee, Wis.—*Improvement in Match Safes*.—Patent dated January 3, 1860.—This invention consists in constructing the safe with an opening or slot *a*, extending the whole height of the box, and a slot *c* extending the whole width of its bottom. It also consists in using in connection with the slot or opening of the box an inclined bottom *b*, to facilitate the removal of the matches when a few only remain on the bottom.

The inventor says: I *claim* a match box or receptacle provided with a slot or opening at one side and at its bottom, substantially as and for the purpose set forth.

I also claim the inclined bottom *b*, with the slots in the side and bottom of the box, for the purpose specified.

No. 26,649.—JAMES CALKINS, of Hudson, N. Y.—*Improvement in the Manufacture of Hydro-carbon Gas*.—Patent dated January 3, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Attaching to the eduction pipe of hydro-carbon blowers, chambers, pipes flues, or for the purpose of heating the air after it leaves the blower or air chamber, and before it comes in contact with the hydro-carbon employed to produce light or heat.

No. 26,650.—J. THEODORE CHABOT, of Buffalo, N. Y.—*Improvement in Ship's Tillers*.—Patent dated January 3, 1860.—This invention consists in arranging the blocks Y Y with the sliding block *t t* upon the forward end of straight tiller E moving upon the square surface P.

Claim.—The surface P of the forward end of straight tiller E, in form representing a parallelogram, in combination with the sliding block *t t* and its friction rollers, double block Y Y, lower and upper straps *c c*, with centre bolts located at the centre of tiller E, as described in the specification.

No. 26,651.—DAVID P. CHAMBERLIN, of Hudson, Mich.—*Improvement in Fruit Gatherers*.—Patent dated January 3, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the lower jaw at right angles with the shaft, or nearly so, in combination with the open work throat and the hose pipe for delivering the fruit at each cutting of the stem, so that the eye of the operator can constantly inspect the fruit at the side of and through the open throat; the whole being arranged and operating in the manner and for the purpose substantially as set forth.

No. 26,652.—JAMES S. COLVIN, of Pittsburgh, Pa.—*Improvement in Steering Apparatus*.—Patent dated January 3, 1860.—G is the axle, composed of two double conical enlargements *a a*, with deep grooves in their surface, running in a continuous channel from end to end of the axle, in which grooves is wound the tiller rope J. This rope is passed round the drum or axle G a number of times, and each end is carried to opposite sides of the vessel and passed over pulley wheels N N, and from these they are secured to the end of the tiller B.

Claim.—The employment of an axle or drum that is provided with four grooved cones, arranged as shown, for the purpose specified.

No. 26,653.—SUMNER COOPER, of Windsor, Conn.—*Improvement in Window Sash Supporters*.—Patent dated January 3, 1860.—The lock operating in connection with the balance consists of two sliding bolts *g g*, operated by the double-headed lever H and spring *k* conjointly. The knob *i* of the lever projects from the casing, and by raising it one of the heads of the lever acting against a projection *l*, on the upper bolt *g*, presses it back so that its head falls within the case, and it becomes inoperative. The spring *k*, which is arranged to vibrate against the point or fulcrum *m*, by having its upper end thrown back, presses forward the lower bolt by the projection *l* and throws it into action.

The inventor says: I *claim* my improved reversible-acting lock and balance, consisting of the double-headed knob lever H, double inclined bolt *g g*, oscillating spring *k*, working against the stops *l l* and *m*, strap *f*, and spring drum D, arranged and operating substantially in the manner and for the purpose shown and described.

I also claim the employment of the metallic strap or band *f*, acting by its flexibility and elasticity to aid in starting the sash, and requiring no grooving of the sash, in combination with the drum D and coiled spring *e*, substantially as and for the purposes herein set forth.

No. 26,654.—MATTHEW CRIDGE, of Pittsburgh, Pa.—*Improvement in Steam Valves*.—Patent dated January 3, 1860.—This invention consists in an arrangement of a revolving cylindrical or cup valve A, which is capable of cutting off the steam at any point in the stroke of an engine, being connected with the governor D of the engine, so that the point of cut off is controlled by the action of the said governor, whereby the charge of steam admitted into the cylinder is regulated or varied so as to meet any changes in the resistance or load of the engine, or any variation in the steam pressure.

Claim.—Providing in such an arrangement (*i. e.*, of a revolving and ascending and descending cup valve) the valve A and its seat B, with port openings having inclined edges 5 6 7 8, so that the steam is cut off by them variably and controlled by the governor, substantially in the manner and for the purposes set forth.

No. 26,655.—HENRY F. CROMWELL, of Cynthiana, Ky.—*Improvement in Ploughs*.—Patent dated January 3, 1860.—The slots *a* and *c* render the wing C adjustable in respect to the bar and sheath E, and the bolts D D¹ and nuts *d d*¹ serve to secure it firmly in any position desired. The flange A, sheath E, and wing C all have the form of a cylindrical segment, so that the wing in every position of adjustment possesses a firm and solid bearing upon the bar and upon the sheath.

Claim.—The described arrangement of the cylindrically curved frame timber or sheath E, wing C, flange A, bar B, slots *a* and *c*, and bolts D and D¹, the whole being constructed and combined in the manner and for the purposes set forth.

No. 26,656.—FRANCIS DAVIS, of Lima, Ohio.—*Improvement in Cultivators*.—Patent dated January 3, 1860.—D E are the shovels secured fast on the legs C C¹. From the left edge of the shovel E a guard *c* projects upward. A wing *d* is formed on the left edge of the shovel E. At the top of the shovel E, and on the leg C¹ of the plough, a curved conductor G is arranged, which forms a continuation of the right curved edge of the shovel E, and may be set more or less to the right by means of a slot *e*.

Claim.—The arrangement of the plough A B C C¹, shovel D or H, shovel E, guard *c*, and slotted adjustable conductor G, all in the manner and for the purposes set forth.

No. 26,657.—PERRY DAVIS, of Providence, R. I.—*Improvement in the Construction of Boats*. Patent dated January 3, 1860.—This invention consists in combining an India rubber spring *a a* with suitable gear wheels for operating the wheels which become propellers when the boat is in the water. The gearing is so arranged as to be disengaged when the boat is on land, and the wheels are used as carriage wheels.

The inventor says: I *claim*, first, the combination with the boat A¹ of spur wheels G G, fixed to the hubs of wheels C C, wheels J J, adjustable shafts F F, cranks G¹ G¹, and compressed India rubber springs, substantially in the manner and for the purposes stated.

Second. I claim the universal joint or gimbal for attaching the bow of the boat to the front axletree, when the same is so constructed as to combine with it an India rubber spring, substantially in the manner and for the purposes set forth.

No. 26,658.—HORACE H. DAY, of New York, N. Y.—*Improvement in the Manufacture of Shirred Goods*.—Patent dated January 3, 1860.—The claim explains the nature of this invention.

The inventor says: I *claim* the compound process described for manufacturing elastic shirred goods, consisting substantially of the two following operations, viz: the coating of the covering cloth with a thin coating of India rubber or the vulcanizable compound of India rubber and sulphur, or its equivalent, without the use of a solvent preliminary to the application of the said coated cloth to strands, strips, or sheets of India rubber, and then the application of the cloth so coated to strands, strips, or sheets of rubber in an extended state.

I also claim, in combination with the compound process above specified, the vulcanization of the fabric produced thereby, the whole invention thus far specified being a compound process composed of three operations.

I also claim, in combination with the said first compound process, subjecting the compound fabric, prior to vulcanization and while in an extended state, to the action of fluted rollers or crimping it, substantially as set forth, this part of my invention being a compound process, or a combination of three operations.

No. 26,659.—LEGER DISS, of Oriskany, N. Y.—*Improved Lock*.—Patent dated January 3, 1860.—This invention consists in having an arm or lug L on the barrel, through which the handle passes, fitting into a cavity *c* in the bolt B, so that the bolt is moved by turning the handle. The bolt has a spring S¹ to cause it to fly back after the handle is released, and is held in place by a stop A catching against a projection *h* at the lower end of it. This stop is divided into two sections *a b*, the back one, into which the point of the key goes,

projecting over the front one, so as to allow the turning of the key to move both sections down.

Claim.—The sectional stop A, overlapping as described, in combination with the bolt B, spring S¹, and the parts connected therewith, the arrangement and construction being substantially as set forth.

No. 26,660.—H. W. ELLIOTT and GEORGE S. CONKLING, of Goshen, N. Y.—*Improvement in Railroad Switches*.—Patent dated January 3, 1860.—This invention consists in operating the switch rails so as to shift them to the right or left and bring them in a line with the main track by the levers J J¹, situated under the cow catcher of the engine, which levers extend back and are operated by the engineer.

The inventors say: We *claim*, first, the combination of the levers H H¹, with their pins c c¹ c², movable cross-tie E, jointed switch rail F¹, and sleeper G, with recesses a a, arranged substantially in the manner as and for the purposes described.

Second. We claim the levers J J¹, having inclined and oblique guides g g arranged in such a manner under the locomotive as to be under the control of the engineer, and so as to operate the switch in the manner described and represented.

No. 26,661.—JAMES R. ENDER, of Trenton, La.—*Improvement in Inkstands*.—Patent dated January 3, 1860.—This invention consists in the employment or use of a hollow cone C, formed of two equal longitudinal parts b b, attached in an inverted position by hinges or joints c c to the under side of a cap B, which screws into the top of the inkstand, each part of the cone having a spring d d bearing against it.

Claim.—The hollow inverted cone C, formed of two longitudinal parts b b, connected to the cap B by joints c c, and acted upon by the springs d d, substantially as and for the purpose set forth.

No. 26,662.—SETH FLETCHER and JOHN P. PIKE, of Bloomfield, Maine.—*Improvement in Corn Shellers*.—Patent dated January 3, 1860.—The corn being dropped into the hopper, it is carried by the rotation of the shelling wheel around with it, until the cob strikes against the guard r, when it is discharged upward, entirely cleaned from the corn, the shelled corn falling beneath the machine.

Claim.—The combination and arrangement with the loosely hung presser plate i, and revolving shelling wheel h, of the follower plate l, with its springs m, hollow wheel shaft F, and centrally arranged regulating screw o, for operation, in relation to each other and unitedly, essentially as specified.

No. 26,663.—GEORGE E. B. FRENCH, of Washington, District of Columbia.—*Improvement in Apparatus for Medical Topical Applications*.—Patent dated January 3, 1860.—This invention consists in making and constructing garments of India rubber, gutta percha, or other suitable material of a double thickness, so that hot, tepid, or cold water or other fluid, or hot or cold air, can and may be introduced therein, by means of the pressure of water or inflation of air, and keeping up any even or required temperature by the use of tubes attached thereto, and of the application thereof to the whole or to any part of the human body for sanitary or other purposes.

Claim.—The described adaptation of garments, &c., to the human body, constructed of India rubber, gutta percha, or other suitable material, for the purposes set forth, and keeping up an even or required temperature, by the use of tubes introduced therein, and forming a part thereof, or any device substantially the same.

No. 26,664.—MATTHEW CRIDGE and SAMUEL WADSWORTH, of Pittsburgh, Pennsylvania.—*Improvement in Steam Engines*.—Patent dated January 3, 1860.—This invention consists in an improved arrangement of keeping the steam port-surfaces of the side pipe and of the cylinder in proper steam tight contact in such a manner that the expansion and contraction of the cylinder and side pipe, caused by variations in their temperature, have no influence thereon.

The inventors say: We *claim* the arrangement of a set screw or its equivalent, passing through the centre of the trunnion and butting against a transverse bar H, at a point which is in one plane (or nearly so) with the port or valve surfaces a a b b, of the cylinder and side pipe, in the manner substantially as described and for the purpose set forth.

We also claim the arrangement of the pins i i, or other means for the support of the side pipe F, in such a manner that the points of abutment are also in one plane (or nearly so) with the port or valve surfaces of the cylinder and side pipe, substantially as described and for the purposes fully set forth.

No. 26,665.—ARTHUR FOLSOM, of Boston, Massachusetts.—*Improvement in Tubular Submarine Tunnels*.—Patent dated January 3, 1860.—This invention consists of square cast iron tubes of the size of the required passage and of such lengths as may be conveniently

handled. The ends of these are so arranged that they can be joined together beneath the water and form of themselves a water-tight joint.

Claim.—Constructing a submarine roadway or tunnel in the manner described, that is to say, of sections of metal tubes connected as set forth, to form continuous portions, which portions are attached to each other substantially in the manner described.

No. 26,666.—SAMUEL GANTZ, of Beaver Creek, Md.—*Improved Invalid's Bedstead.*—Patent dated January 3, 1860.—This invention consists of a new arrangement of suspension canvas, and also in an arrangement for lowering the mattress instead of elevating the patient.

Claim.—The described new arrangement of canvas and mattress, the latter being lowered while the former remains at rest, as described, for the purpose set forth.

No. 26,667.—JAMES GARDETTE and HENRY RANCE, of New Orleans, La.—*Improvement in Apparatus for forming Vapor for Medical Purposes.*—Patent dated January 3, 1860.—Liquid being poured into the reservoir D, and the cock F opened, it flows down the tube E, and through tube E¹, and fills the arms J; the parts are then rotated very swiftly, and the centrifugal action discharges the liquid through the orifices d of the arms J, and as it is thrown off it is struck by the plates P, and flies off in the form of fine mist, which soon charges the air of the entire apartment.

Claim.—The reduction of liquids into mist or vapor, at any degree of temperature without evaporation, by means of a centrifugal pump, or its equivalent, projecting fine jets of the liquid against disks set at any angle, substantially as described, so that the liquid may be respired with the atmosphere.

No. 26,668.—HEMAN GARDINER, of New York, N. Y.—*Improvement in Springs for Carriages and Railroad Cars.*—Patent dated January 3, 1860.—This invention consists in arranging and combining a coiled or scroll steel spring A upon a cylinder B, with semi-elliptical springs H H placed in recesses on the periphery of such cylinder.

Claim.—Combining and arranging the coiled spring or blade A with the loose auxiliary semi-elliptical springs H H, upon and around the central cylinder having upon its periphery the recesses to receive the loose springs; the whole operating together in the manner and for the purposes described.

No. 26,669.—DENNIS C. GATELY, of Newtown, Conn.—*Improvement in the Manufacture of India Rubber Belting.*—Patent dated January 3, 1860.—The claim explains the nature of this invention.

Claim.—The improvement described in the manufacture of machine beltings or bandings, composed either wholly or in part of India rubber or gutta percha, which consists in partially heating the same by placing them in contact with heated rolls or hollow cylinders, or in other suitable modes, previous to their being vulcanized, substantially in the manner and for the purposes described.

No. 26,670.—JOHN GROSS, of Decatur, Ill.—*Improvement in Corn Planters.*—Patent dated January 3, 1860.—This invention consists in adjusting the position of the dropping device, independently of the gearing and driving wheel, so that the operator may be enabled to drop the corn at the exact place in the furrows.

The inventor says: I *claim*, in combination with the revolving shaft of a corn planter, having seed cells in its circumference, the slide h and levers p k, for raising and disconnecting said shaft from the driving wheels, substantially in the manner and for the purpose described.

I also claim, in combination with the lifting devices b, p, and k, the adjusting of the position of the seed cells in the revolving shaft F, by hand, to make them drop the grain at exact points independently of and without turning either of the gearing and driving wheels, viz: by means of an index or hand v secured to said shaft F, substantially in the manner and for the purpose described, and said shaft at the same time detached from the axle or driving wheel, as set forth.

No. 26,671.—WILLIAM C. HABBERTON, of Mount Carmel, Ill.—*Improved Apparatus for Stuffing Horse Collars.*—Patent dated January 3, 1860.—This invention consists in the use of a clasp H and taper pin in combination with the collar block B, for the purpose of holding the collar upon the block while the lower curved or throat portion is stuffed. It also consists in the combination of a lever arrangement with the stuffing rod G, provided with one or more stops.

The inventor says: I *claim*, first, the clasp and taper pin, in combination with the collar block, substantially as and for the purposes set forth.

Second. The combination of the adjustable lever arrangement with the stuffing rod and collar block, substantially as and for the purposes set forth.

Third. The use, in combination with a collar box and stuffing rod, of an adjustable bending and shaping machine, constructed and operating substantially as described in the manner and for the purpose set forth.

No. 26,672.—ISAAC HALLOWAY, of New York, N. Y.—*Improvement in Axle Boxes for Vehicles*.—Patent dated January 3, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, an axle box arranged with chilled cast iron balls D to fit into a cap C, together with a groove *a* in the axle A, an oil hole *r* in the centre of the cap C, and quadrant recesses *g* in the inside of the sleeve, substantially as and for the purposes specified.

Second. The arrangement of the recess *d* in the flange *e*, in the front end of the axle A, substantially as described, for the purpose of facilitating the operation of putting in and taking out the balls D.

No. 26,673.—JOSEPH HARRIS, of Dorchester, Mass.—*Improvement in Railroad Car Axle Boxes*.—Patent dated January 3, 1860.—This invention consists in so forming a box that it will have a bearing at the front and back to receive the end thrust of the axle.

Claim.—In combination with an axle box in which the journal of the axle is inserted endwise, and in which the soft metal packing may also be inserted from the end, the front and back bearings *d c*, and flanges *h k*, for receiving the end thrust of the axle, and thus protecting the soft metal packing, substantially as described.

No. 26,674.—B. B. HAWSE, of Morrisville, Vt.—*Improved Clothes Dryer*.—Patent dated January 3, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Two perforated hubs H H¹ movable upon the shaft, in combination with the swivel pulley P upon the shaft head cord C, performing the double function of expanding and elevating the frame, and the self-acting ratchet eccentric R, as applied to clothes dryers.

No. 26,675.—RANDALL HOLDEN, of New York, N. Y.—*Improved Spring Bed Bottom*.—Patent dated January 3, 1860.—This invention consists of a spring of rubber webbing attached at one end between plates of metal *a b*, and in turn to the rail of a bedstead, and having at the other end an extension link G, by which it is attached and made adjustable, and also by pins *c d* in the slats by which they are kept from swerving.

Claim.—The extension link G and pins *c d*, combined with the spring D and fastening *e b a*, substantially as and for the purposes set forth.

No. 26,676.—N. HOMES, of Laona, N. Y.—*Improvement in Straw Cutters*.—Patent dated January 3, 1860.—This invention consists in combining, with an ordinary reciprocating knife C and gate B, a leger knife E, arranged to operate conjointly with the upper knife for the purpose of facilitating the cutting operation.

Claim.—The combination of the two knives C E, arranged to operate substantially as and for the purpose set forth.

No. 26,677.—WILLIAM H. HORSTMANN, of Brooklyn, N. Y.—*Improvement in Laying Telegraph Cable*.—Patent dated January 3, 1860.—The improvement consists in properly suspending the cable after it is paid out from the vessel by floats *q*, and then allowing it gradually to settle to the bottom or bed of the ocean in curves or festoons.

Claim.—The floats *q*, attached and arranged substantially as described, for the purpose of a graduated action, substantially as and for the purposes set forth.

No. 26,678.—JEAN JAKES HUBER, of Geneva, Switzerland.—*Improvement in Jewelry*.—Patent dated January 3, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Forming articles of jewelry of a series of movable and adjustable pieces, so that the aspect and appearance of the said articles may be changed at pleasure, substantially as set forth.

No. 26,679.—L. T. HULBERT, of Painesville, Ohio.—*Improved Double Seaming Machine*.—Patent dated January 3, 1860.—The operation is as follows: The proper former and rotary head being secured on the mandrel and shaft, and their centres brought in direct line by moving the frame C horizontally and securing it by the set screw, the standard R is then adjusted by means of the slot and bolt, so that the edges of the former and head come together sufficiently to admit them between the article to be seamed, the rotating head is then brought down on the seam by turning the pressure screw.

The inventor says: I *claim*, first, the rotating head, operated in the manner and by the

means described, so as to produce a lateral pressure on the seam, in combination with the mode of adjusting the direct line arrangement referred to by means of the shank, socket, and set screw, as described, together with the adjustable standard R, substantially as specified and for the purposes set forth.

Second. I claim the former A¹, with its raised or convex border C¹, and tapering edge B¹, in combination with the rotary head D¹, having its edge constructed as shown, to be used in conjunction with the arrangement in my first claim, for the purpose of double-seaming raised or convex work, as described and shown.

No. 26,680.—ENOCH JACOBS, of Cincinnati, Ohio.—*Improvement in Truss Frames for Bridges*.—Patent dated January 3, 1860.—This invention consists in the combination of double angle iron rails with certain arrangements of vertical and oblique braces and tie rods.

Claim.—The combination of the upper and lower double angle iron rails with the tubular braces and tie rods and the oblique interlocking braces, to form a bridge truss, all arranged and operating in the manner substantially as set forth.

No. 26,681.—BARTON H. JENKS and WILLIAM A. TUTTLE, of Philadelphia, Pa.—*Improvement in Cotton Gins*.—Patent dated January 3, 1860.—This invention consists in surrounding a portion of the ginning cylinder with smooth metallic bands or ribs so placed as to be concentric, or nearly so, with their outer surface, and just above the line of the points of the gin roller.

Claim.—The arrangement of stationary metallic bands A A A A A, &c., arranged concentric with and around either the whole or a part of the circumference of the gin cylinder, and just above the end of the gin teeth, in the manner and for the purpose specified.

No. 26,682.—HENRY R. KINNEY, of Portsmouth, Ohio.—*Improvement in Cultivators*.—Patent dated January 3, 1860.—This invention consists in the arrangement of the furrow ploughs D D D¹, adjusting devices E E E, and the frame A B C, so that the ploughs may be all adjusted and shall all stand on the same side of a row of plants and one row of them turn up a furrow slice close along the side of the young plants, and another receive the same and return it in a loose or friable condition back against the roots of the plants and the other plough up the remaining portion of the soil between the two rows of plants.

Claim.—The arrangement of the furrow ploughs D D D¹, adjusting devices E E E, and frame A B C, in the manner set forth.

No. 26,683.—HENRY F. KNODERER and LEVI F. KNODERER, of Chillicothe, Ohio.—*Composition for Preventing the Incrustation of Steam Boilers*.—Patent dated January 3, 1860.—The claim will explain the nature of this invention.

Claim.—The application of a compound of alum, glue, wood ashes, and wheat bran, prepared and applied as specified, to prevent the deposition and accumulation of lime, known as "lime scale," upon the interior of steam boilers and pipes, of whatever kind, as specified and substantially as set forth.

No. 26,684.—THOMAS LEAVITT, of Malden, Mass.—*Improved Second Anchor Shackle*.—Patent dated January 3, 1860.—This invention consists in so constructing the roller as to have it connected with the other parts of the apparatus when the shackle is slipped upon or taken from the chain and not separable from it.

Claim.—As an improvement in the apparatus herein before referred to as patented, the combination of the roll *a* or *b* with the cheek *c*, substantially in the manner described for the specified purpose.

No. 26,685.—URI LEE, of Burlington, Mich.—*Composition for Mixing with Paints*.—Patent dated January 3, 1860.—The inventor says: I put two gallons of rain or soft water in a vessel, and add six ounces of sal soda and three ounces of borax, and heat the water until the sal soda and borax are dissolved, and then add one gallon of linseed oil, and stir the whole until it is thoroughly compounded.

Claim.—The described composition or paint vehicle mixed or compounded in the proportions stated.

No. 26,686.—MOSES W. LESTER and MAX HJORTSBERG, of Chicago, Ill.—*Improvement in Apparatus for Heating and Ventilating Buildings*.—Patent dated January 3, 1860.—The claim and engraving explain the nature of this invention.

Claim.—The arrangement of the ventilating pipes F, extending down to the bottom of the furnace drum B and chimney flue A, in combination with a furnace which is constructed with a central fire-box K P L, radiating drum H H G G I I O, and air-circulating and heating

chamber extending up beyond the ventilating drum, in the manner and for the purposes described.

No. 26,687.—AUSTIN LEYDEN, of Atlanta, Ga.—*Improvement in Sewing Machines*.—Patent dated January 3, 1860.—The spool holder I, with the spool in it, is put in its place in the bed H through an opening *m m*, in the bed plate A. The position occupied by the spool holder is such that the axis of the spool I is parallel with the face of the bed plate and oblique to the direction of the feed motion.

Claim.—The spool holder, constructed and applied in combination with the bed H, substantially as described.

No. 26,688.—GEORGE B. LEWIS, of Moreau Station, N. Y.—*Improved Milk Pan Rack*.—Patent dated January 3, 1860.—This invention consists in having two frames provided with horizontal parallel slats and connected by a joint at their upper ends, said frames being provided with horizontal slatted platforms, and also with adjustable side frames.

Claim.—The use of the frames A A, connected by joints *c*, in connection with the supplemental frames E E, and with or without the horizontal frames B C D, substantially as and for the purpose set forth.

No. 26,689.—FRANCIS C. LOWTHROP, of Trenton, N. J.—*Improvement in Pivot Bearings*.—Patent dated January 3, 1860.—The claim and engraving explain the nature of this invention.

Claim.—Interposing between the plate C of a turntable, swing bridge, or other like object, and the step or foundation plate A a pivot B, constructed and arranged in respect to the plates substantially as described, so as to form a centre on which the object connected to the plate C may roll and balance itself, and so as to present, in contact with the plate A, a self-lubricating surface.

No. 26,690.—GEORGE B. MARKHAM, of Mead's Mills, Mich.—*Improvement in Seeding Machines*.—Patent dated January 3, 1860.—This invention consists in the arrangement of parts whereby the driving wheel can be thrown out of gear instantaneously and at the same time the machine be allowed to back without effect on, or injury to the dropping mechanism.

The inventor says: I *claim*, first, the arrangement of the sleeve E, on the axle of the driving wheel, with the ratchet wheel *e* and cams *d*, or their equivalents, in combination with the pawl *g*, dog *i*, and pointed rod *j*, or its equivalent, substantially in the manner and for the purpose specified.

Second. The arrangement of the reversible seat E, with two bottoms *l l'*, substantially as described, in combination with the hand lever K, and seed slide J, whereby the dropper is enabled to face the rows in whatever direction the machine may run, and to adjust the seat to a convenient position for operating the lever.

No. 26,691.—J. H. MASKER, of Newark, N. J.—*Improved Machine for Turning Hat Blocks*.—Patent dated January 3, 1860.—This invention consists in the adaptation of machinery to varying the length, size, and shape of blocks from the pattern block from which they are turned or formed by the same machine as will, if desired, produce an exact duplicate of the pattern.

Claim.—The oscillating frame B and the devices for altering the shape of the block from that of the pattern, constructed, combined, and arranged substantially as set forth.

No. 26,692.—JOHN McMANNUS, of New York, N. Y.—*Improvement in the Ventilation of Hats*.—Patent dated January 3, 1860.—The claim and engraving will explain the nature of this invention.

Claim.—A ventilating piece composed of India rubber or gutta percha, having a smooth surface, next the head, and grooves or openings next the brim, and firm enough not to crush or close up said openings, as represented and for the purpose set forth.

No. 26,693.—JOHN B. McMUNN, of Port Jervis, N. Y.—*Improved Lubricating Compound*.—Patent dated January 3, 1860.—The alkaline base of this compound is a solution of the carbonate of potassa in water, which unites and forms combinations with oleine and stearine, the proximate acid principles of animal and vegetable oils and fats and tallow, and with cerine, the acid principle of beeswax and myrtle wax.

The inventor says: I *claim* the composition made of the proximate acid principles of the herein-named ingredients and alkali, by combining them together in the manner and proportions as substantially described and for the purposes set forth.

And I also claim the rejection of the underlye in the process, and the substitution and mixture of water with the residual mass, to reduce it to a thinner consistency for practical use, substantially as described and set forth.

No. 26,694.—A. P. MERRILL, JR., of Natchez, Miss.—*Improvement in Hoop Locks*.—Patent dated January 3, 1860.—This invention consists in attaching to one end of the hoop a metal plate B provided with a slot *b*, and having a hook C secured to it in such a relative position with the slot that the opposite end A of the hoop which is perforated may be passed through the plate, and either of its perforations fitted on the hook.

Claim.—The plates B provided with a slot *b* attached to one end A¹ of the hoop, the hook C projecting from the inner side of the plate in connection with the perforated end A of the hoop, substantially as and for the purpose set forth.

No. 26,695.—F. MISNER and P. A. MISNER, of Fox, Ill.—*Improvement in Cultivators*.—Patent dated January 3, 1860.—The cultivator passes over the row of corn; the shovels of one wing standing on one side of the row and those of the other wing on the other side, consequently both sides of the row of corn are worked at one operation.

Claim.—The arrangement of the beam *h*, wings *m*, transverse pieces E O, handles H, slotted standard 2, legs *u*, shovel R, castings C B, brace rods *b*, forked strap G, forked rod *x*, and transverse timber *s*, the whole being constructed and used together in the manner and for the purpose described.

No. 26,696.—ALBERT MOREHOUSE, of Farmer, N. Y.—*Improvement in Gates of Water Wheels*.—Patent dated January 3, 1860.—This invention consists in combining with the spout 5, through which the water is laid on the wheel, and with each other, two gates 6, and 7, set in a position angular to each other and to the direction of the stream.

Claim.—The combination, with the spout 5 and with each other, of the gates 6 and 7, inclined and arranged as described for the purposes set forth.

No. 26,697.—CAMPBELL MORFIT, of New York, N. Y.—*Improvement in a Substitute for Wax*.—Patent dated January 3, 1860.—This compound is composed of Japan vegetable wax and paraffine, mixed by fusion in a double bottom kettle, heated by a current of steam and then cast into blocks.

Claim.—The use of Japan vegetable wax, in combination with paraffine, in the manner and for the purposes set forth.

No. 26,698.—JOHN MURPHY, of New York, N. Y.—*Improvement in treating Waste and Inferior Gums*.—Patent dated January 3, 1860.—The claim explains the nature of this invention.

The inventor says: I *claim* the process described for manufacturing the vulcanizable compounds of vulcanizable gums, consisting of the following operations, viz:

First. The manufacture of hard stock of the vulcanizable gum by blending it with sulphur, or its equivalent, and vulcanizing the compound until it is hard.

Second. The reduction of the hard stock to powder.

Third. The formation of a compound of the ground stock and raw gum by blending the two together.

Fourth. The vulcanization of the compound formed by the preceding operation, the several operations constituting the process being effected in the order stated.

No. 26,699.—THOMAS NEWCOMB and G. W. BYRD, of Smith's Fork, Tenn.—*Improvement in Cotton Cultivators*.—Patent dated January 3, 1860.—The beam A, which is similar to the beam of a plough, is supported by two wheels B behind and two fore wheels C C, and it is furnished with two handles D, whereby the course of the machine may be governed in the same manner as that of ploughs.

Claim.—The arrangement and combination, with the ploughs G G, of the central beam A, double-acting hoe F, cog pinions *c d*, crank *g*, rock shaft *i*, and pitman *h*, all in the manner set forth for the purpose specified.

No. 26,700.—DANIEL NICHOLS, of Onarga, Ill.—*Improvement in Corn Planters*.—Patent dated January 3, 1860.—To the front end of the runners D and right before their centres are secured the rolling cutters F, which serve to clear the track; the guards G are attached to the side of the runners; the metal strips I are secured to the rear end of the runners.

Claim.—The arrangement of the rolling cutters F, guards G, and metal strips I, in combination with the runners D, which are hinged to the frame A, substantially in the manner and for the purpose specified.

No. 26,701.—SEPTIMUS NORRIS, of Philadelphia, Pa.—*Improvement in Steam Boilers*.—Patent dated January 3, 1860.—D is the removable water wall, which consists of a box fitting closely to the bottom and sides of the fire chamber A and connected to the water space G in

the crown of the boiler by means of the circulating pipes *b*, and communicating with the water grates *c* at the rear ends of the latter.

Claim.—The employment of the removable water wall *D* fitting closely to the bottom and sides of the fire chamber, substantially in the manner described for the purposes set forth.

No. 26,702.—M. OBERMILLER, of Tiffin, Ohio.—*Improvement in Railroad Car Brakes.*—Patent dated January 3, 1860.—This invention consists in a combination of levers, which, upon the engine being reversed, act upon the rubbers and stop the train, being held in their position by a spring detent *f*, and are released simultaneously throughout the train by pulling a cord.

Claim.—The combination of the spring detent *f* with levers *a* *E* and *H*, projection *h* on draw bar rod *b* and spring *c*, substantially as and for the purposes set forth.

No. 26,703.—EDWARD PATRIE, of Livingston, N. Y.—*Composition for Soap.*—Patent dated January 3, 1860.—This compound is composed of spirits of wine, spirits of turpentine, and hartshorn, mixed with gum camphor and indigo. In forty-eight pounds of boiling water are dissolved twenty-four parts of common soap, and while at the boiling point three ounces of the above described solution is added to it.

Claim.—The composition of matter, together with the process for making the same, substantially as the same is set forth in the specification.

No. 26,704.—NELSON PECK, of Wilmington, N. Y.—*Improvement in Road Scrapers.*—Patent dated January 3, 1860.—When the bar *F* is in position, the head or stock *A* is elevated above the earth, the machine being supported by the wheels *E E*. When the bar *F* has its back end in the lower recess *e*, the scoop *C* rests on the earth, and as the machine is drawn along the earth will be scraped up in front of the scoop.

Claim.—Attaching the wheels *E E* to the head or stock *A*, to which the scoop *C* is secured, substantially as shown, so that the same may be adjusted to admit of the raising and lowering of the head or stock, for the purpose set forth.

No. 26,705.—WALTER PECK, of Rockford, Ill.—*Improvement in Pumps.*—Patent dated January 3, 1860.—In the bottom plate *m* of the cylinder *A* is formed a valve opening, furnished with an ordinary flap valve *k*, opening upward. In the bottom plate *h* of the hollow piston *A*² is another valve opening, furnished with another and similar valve *f*; *i* is an annular flange, to prevent the bottom of the hollow piston *A*² from coming down upon the lower valve *k* and injuring it.

Claim.—The construction or arrangement of the valves *c e f* and *k* within the cylinder *A*, in combination with the hollow piston *A*² and hollow piston rod *B*, the whole constructed to operate as specified.

No. 26,706.—GEORGE W. PENNISTON, of North Vernon, Ind.—*Improvement in Cotton Presses.* Patent dated January 3, 1860.—To fill this press the doors *E* and *C*¹ are opened and the press box filled with cotton, and the doors are closed and fastened. The windlass is then worked to draw down the toggle levers until the screw *I* operates the bar *F*⁴ and releases the door *F*¹, when the bale is ready to receive its hoops.

The inventor says: I claim the clevis *F*², constructed substantially as described, in combination with the bar *F*¹ and key *F*³, for locking and releasing the doors of the press box, as specified.

I claim fastening the block *I*¹ to the rockshaft *H*², so as to relieve it of some of the pressure in working the press, as set forth.

No. 26,707.—LOUIS PLANER, of New York, N. Y.—*Improvement in Grooved Pulleys.*—Patent dated January 3, 1860.—Each side of the groove *b* is furnished with sharp pointed ridges *c*, running tangentially from the outer circumference of the pulley to the circle forming the bottom of the groove, and in a direction opposite to the direction in which the pulley has to operate, and they are so arranged that those on one side of the groove stand exactly opposite to the spaces between those on the other side, and may be slightly curved.

Claim.—A grooved pulley *A*, arranged with tangential ridges *c* on the sides of the groove *b*, as and for the purpose specified.

No. 26,708.—IRA C. PRATT, of Morton, Ill.—*Improvement in Draining and Pipe-laying Machines.*—Patent dated January 3, 1860.—The shaft *D* is adjustable vertically by means of the lever *C*, in such manner that the foot of the cutter or shaft *D* and mole point *H* may be adjusted at any desired depth in the ground. The mole *I* is made with a shank *K* and flange *k*; in said flange *k*, is a slot *K*¹, which is adapted to receive the screw *l*, by means of which the pipe *I* may be secured in such manner as to be drawn within the ground.

The inventor says: I *claim* pivoting the mole point on the adjustable cutter D, for allowing lateral motion in said point and the mole attached thereto, substantially as described.

I also claim the screw *l*, or its equivalent, in combination with the mole I K K K¹, for securing the pipe in such a manner that it may be drawn within the perforation made by the mole I, substantially as described.

No. 26,709.—C. L. PYRON and ROBERT BRUCE, of Manchester, Tenn.—*Improvement in Machinery for Changing Motion*.—Patent dated January 3, 1860.—This invention consists in an arrangement of loose and fixed spur wheels D D¹ G G¹ upon parallel shafts B with a segmental rack E, from which rack projects out a suitable distance a lever or working beam K, so that by elevating and depressing said beam, or vibrating it, a continuous rotary motion will be transmitted to the shafts carrying the spurred gearing.

Claim.—The combination of segmental rack E with lever or beam K, in combination with clutch wheels G G¹ and spur wheels D D¹, arranged and operating in the manner and for the purposes set forth.

No. 26,710.—THADDEUS S. SCOVILLE, of New York, N. Y.—*Improved Clothes Frame*.—Patent dated January 3, 1860.—The arms B B may be secured to any kind of support or standard A. At suitable positions on the standard A the plates C C are secured by means of screws or bolts. These hinge plates C C are set at an angle of forty-five degrees, so that the arms B B may be moved to both a horizontal and vertical position between them and the sides of the support.

Claim.—The hinge plates C C and bolts D D, arranged in combination with the support A and arms B B, substantially in the manner and for the purposes specified.

No. 26,711.—FREDERICK SCHUTTE, of Philadelphia, Pa.—*Improved Vegetable Cutter*.—Patent dated January 3, 1860.—This invention consists of a box or hopper C, having an inclined plane *n*, and being arranged and rendered adjustable on a frame A, in respect to a revolving cutting wheel C, so that the slices cut from the vegetable, &c., may, by the said wheel, be varied in thickness at pleasure.

Claim.—The box or hopper C, having an inclined plane *n*, and being arranged and rendered adjustable on the frame A, in respect to the cutting wheel C, as and for the purpose set forth.

No. 26,712.—PHILANDER SHAW, of Boston, Mass.—*Improvement in Heels for Boots and Shoes*.—Patent dated January 3, 1860.—The claim and engravings will explain the nature of this invention.

The inventor says: I *claim* the heel described as being made of compressed wood, which is first filled with resinous or oily or other equivalent matter, for the purpose set forth.

I also claim the holding band *c*, arranged to be fixed upon and removed from the sole, in combination with the metallic plate *b* and heel *a*, substantially as set forth.

No. 26,713.—JOSEPH SINGER, of Cleveland, Ohio.—*Improved Hose Coupling*.—Patent dated January 3, 1860.—This device consists of a ring of metal D secured around the male part of the coupling by screws, and diametrically opposite to each other and proceeding out beyond the face of this half of the coupling are lugs or arms E E, to the ends of which are pivoted eccentric levers F F, the longer arms of which are connected together by a semi-circular bar or strip G, having a lug or finger piece *d* projecting from its crown, by which the levers are raised in separating the coupling.

Claim.—The adjustable ring D, arms E E, and eccentric levers F F, in combination with the semi-circular strip G, all applied and operating in the manner and for the purposes set forth.

No. 26,714.—JOSEPH W. STICKLER, of Orange, N. J.—*Improved Vegetable Cutter*.—Patent dated January 3, 1860.

The inventor says: I construct an oblong box of wood or metal A, and across this, at the top, I place a series of thin knives *b* an inch apart, and immediately under these I place one or more similar knives lengthwise, as at *c*. A cover *d* is hinged upon the side of the box, and this has upon its under surface projecting blocks, which should nearly fill the spaces between the knives *b*.

Claim.—The series of cutting knives, in combination with the projecting blocks upon the cover, arranged in the manner and for the purposes substantially as described.

No. 26,715.—NELSON P. STRATTON, of Waltham, Mass.—*Improvement in Watches*.—Patent dated January 3, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement wherein the main ratchet wheel C is disposed between the main gear wheel and the barrel, and made to serve as a head to the barrel and to support the wind-

ing arbor and its spring click, as described, the maintaining power spring being arranged between the gear and ratchet, as specified.

No. 26,716.—CHARLES D. SUTTON, of Kensico, N. Y.—*Improved Calipers*.—Patent dated January 3, 1860.—In using these calipers, the arm 7 is first turned out of the way, to give an opportunity to apply the instrument in taking the measurement of the article. The arms 1 and 2 having been adjusted in the usual manner to the size of the article, are then secured in position by the set screw 16, and on removing the instrument the radius may be read off by folding the graduated arc over upon one of the arms.

Claim.—The combination of the arms 1 and 2 with the spring 11 and 10 and the folding arm 7, substantially as and for the purposes set forth.

No. 26,717.—JOHN SUTTON, of New York, N. Y.—*Improvement in Apparatus for Evaporating*.—Patent dated January 3, 1860.—The claim and engraving explain the nature of this invention.

The inventor says: I *claim* so applying a steam coil, or other heater, in combination with an evaporating vessel, that it may be independent of the vessel in its action, and may float in and rise or fall with the surface of the liquid in the vessel, substantially as and for the purpose described.

I also claim the employment, in combination with a so applied heater, of means of elevating it wholly above and depressing it wholly below the surface of the liquid as may be desired, substantially as and for the purposes specified.

No. 26,718.—J. V. TAYLOR, of Dixon, Ill.—*Improvement in Ploughs*.—Patent dated January 3, 1860.—This invention relates to a shield attachment for ploughs, so applied and arranged as to protect young growing plants, preventing them from being injured by the ploughs and the earth cast up during the process of cultivation.

Claim.—The combination with a cultivator plough of a shield E, when said shield in its transverse section presents a cima reversa or wave shape, and is perforated and suspended at the side of the cultivator by means of springs a H, and an adjustable clip G, substantially as and for the purposes set forth.

No. 26,719.—WILLIAM D. TITUS, of Brooklyn, N. Y.—*Improvement in Medicated Pads*.—Patent dated January 3, 1860.—The claim and engraving explain the nature of this invention.

Claim.—Filling the pads A A¹ of a belt or girdle with the compound, proportioned and applied in the manner and for the purpose substantially as described and shown in the drawings.

No. 26,720.—JONATHAN T. TROTTER, of New York, N. Y.—*Improvement in Finishing Felt Rubber Goods*.—Patent dated January 3, 1860.—The claim and engraving explain the nature of this invention.

Claim.—The method of finishing or fixing the felt-like coating of powdered flock, ground cork, or other similar fibrous material, upon the surface of a previously water-proofed fabric, by means of a roller partially submerged in a solution of, or solvent of any vulcanizable gum, so that as the submerged parts of the roller are raised from the bath it will deliver the solution or solvent upon the flocked surface of the fabric in an even and uniform sheet to fix the flock into the surface of the fabric smoothly and uniformly together to give it a cloth-like textile appearance.

No. 26,721.—S. T. TROWBRIDGE, of Decatur, Ill.—*Improvement in Canes for Physicians*.—Patent dated January 3, 1860.—This invention consists in having the cane hollow or formed of a tube closed at its bottom, and having a semi-tube B attached to the knob or handle, said semi-tube fitting within the cane and allowed to pass freely in and out of it, and forming a receptacle for vials containing medicine.

Claim.—A physician's cane, constructed with a semi-tubular vial receptacle, substantially as and for the purpose set forth.

No. 26,722.—JAMES TUCKER, of Washington, D. C.—*Improved Stopper for Chain Cables*.—Patent dated January 3, 1860.—This invention consists of a grooved stock or base B, with a scored pawl E, and guiding staple or ring L, to guide the chain into the groove in the stock.

Claim.—The guiding staple or ring, in combination with the grooved stock and scored pawl, arranged to operate substantially as described.

No. 26,723.—RICHARD VOSE, of New York, N. Y.—*Improvement in Car Springs*.—Patent dated January 3, 1860.—This invention consists in the manner of placing and securing the layers of felt and the layers of rubber within cast-iron rings, the interior surfaces of which

are grooved and shaped so as to secure the various layers and give them the required bearings suitable for a spring, and yet not too much to compress or restrain the action of the rubber.

Claim.—Making the metallic ring or circle with a central groove for the purpose of securing the felt firmly in its place, when combined with the India rubber disks; that is to say, in the combination of the centrally grooved ring or circle with the layers of felt and rubber, arranged and operating together as described.

No. 26,724.—SAMUEL WETHERED, of Baltimore, Md.—*Improvement in Hot Air Furnaces.*—Patent dated January 3, 1860.—The claim and engraving explain the nature of this invention.

Claim.—The combination of the inclined fire-box, side cold air doors or registers and auxiliary side draft and cleansing passages, with a furnace constructed with a series of hollow arches, which form a zig-zag flame passage from the fire-box to the chimney flue and communicate by branch tubes with a hot-air reservoir, all in the manner and for the purposes set forth.

No. 26,725.—JOHN C. WILKINS, of Fox Chase, Pa.—*Improved Cabbage Cutter.*—Patent dated January 3, 1860.—The heads or material to be cut up are placed in the horizontal feed trough B, and fed up toward the cutter D, which is caused to rotate rapidly by turning the handle F of the crank E.

Claim.—The movable holder blocks C¹, and securing keys e, in combination with the adjustable radiating knives f, rotary face plate D, and horizontal hopper B, the whole constructed to operate as and for the purpose set forth.

No. 26,726.—HENRY WILVERTH, of Caseyville, Ky.—*Improvement in Coal Excavating Machines.*—Patent dated January 3, 1860.—This invention consists in giving to the rotary cutter head a fourfold motion so that a long and deep trench can be made before it becomes necessary to move the machine, and in an arrangement of the cutters in relation to the cutter head and to the rods which support the same, whereby the trench is made wide enough to admit said head together with the rods.

The inventor says: I *claim*, first, the arrangement and combination of the frames A B C, together with the toothed racks b, and shafts c, or their equivalents, and with the screw shaft h, arms E, cutter head D, and toothed arc c¹, or its equivalent, substantially in the manner and for the purpose specified.

Second. The cutters h¹, arranged substantially as described, in combination with the disks a¹, springs j¹, and pivots i¹, or their equivalents, for the purpose set forth.

No. 26,727.—JAMES YOUNG, of Boston, Mass.—*Improved Pen Rack.*—Patent dated January 3, 1860.—This invention consists in placing in the base of the rack one or more drawers for holding pens, wafers, and stamps.

Claim.—The described pen rack with a drawer B in the base A, substantially as described.

No. 26,728.—GEORGE FREDERICK ZIMMAN, of Philadelphia, Pa.—*Improved Ironing Table.* Patent dated January 3, 1860.—The parts are so arranged that the ironing board can be readily adjusted and firmly sustained at any required angle of inclination with one end free, as well as in a horizontal position upon its supporting frame.

Claim.—The combined arrangement of the ironing board B with the self-adjusting tie N, upon a supporting frame adapted thereto, so as to operate together in the manner and for the purposes set forth and described.

No. 26,729.—JOHN V. S. ADRIANCE and JOSEPH W. CLARK, of Buffalo, N. Y., assignors to J. V. S. ADRIANCE and BENJAMIN G. KELLY, of said Buffalo.—*Improved Refrigerator.*—Patent dated January 3, 1860.—The nature of this invention is explained by the claim and engravings.

Claim.—The combination of a refrigerator, constructed in the manner set forth, with a provision chamber, when said provision chamber is provided with double glass walls or sides, with an air space between said walls, the two being so arranged and constructed that the provisions within will be exposed to view, while a current of cold air from the ice-box is being constantly circulated through the provision chamber, substantially as specified.

No. 26,730.—WILLIAM C. ALLISON, of Philadelphia, Pa., assignor to himself and JOHN MURPHY, of said Philadelphia.—*Improvement in City Railroad Cars.*—Patent dated January 3, 1860.—This invention consists in illuminating city railroad cars, by placing on that portion of the roof which overhangs the driver's platform an arched reflector H, having a plate or glass in front and a lamp inside, so that the rays of light may be directed by the reflector through the windows of the car to the interior of the same.

Claim.—The arched reflector H, its plate of glass H, and the lamp G, when arranged on

and adapted to the overhanging portion D of the roof, in respect to the window *f*, and the other windows of the car, substantially as and for the purpose set forth.

No. 26,731.—**SOLOMON N. CARVALHO**, of Baltimore, Md., assignor to Himself and **L. K. BOWEN**.—*Apparatus for Superheating Steam*.—Patent dated January 3, 1860.—This invention consists in passing a continuous supply of ordinary steam from the boiler through a cast-iron retort containing equal parts of the black proto-oxyde of iron and iron turnings, the retort being placed either in the furnace of the boiler or in a separate furnace.

The inventor says: I *claim*, first, subjecting steam, while undergoing the superheating process, to the action of the metals named, as and for the purposes set forth.

Second. I claim the arrangement of the pipes, the valves, and the retort, or its equivalent, for conveying from, heating, and returning to the boiler, or its connecting steam dome, the steam, substantially as described.

No. 26,732.—**L. R. DREYSEL**, of St. Louis, Mo., assignor to himself and **JAMES E. BLYTHE**, of said St. Louis.—*Improvement in Ruling Machines*.—Patent dated January 3, 1860.—This invention consists in applying the holder D to the holder B, by means of the two links *a* and *b*, which are attached to each other by means of a working joint, and which are also attached to the beam A and holder D by means of working joints.

Claim.—The application of the penholder D to the penholder B, substantially in the manner described for the purpose specified.

No. 26,733.—**THOMAS FRY**, of Brooklyn, N. Y., and **CHARLES A. SEELEY**, of New York, N. Y.—*Mode of backing up Pictures on Glass*.—Patent dated January 3, 1860.—The claim explains the nature of this invention.

Claim.—The process of using wax, stearine, spermaceti, or other substances or compositions substantially the same, for the purpose of backing up, and as a medium of color for the chemotype and other pictures or designs on glass.

No. 26,734.—**THEODORE P. GOULD**, of Niagara Falls, N. Y., assignor to **STEPHEN V. R. WATSON**, of Buffalo, N. Y.—*Improvement in Breech Loading Fire Arms*.—Patent dated January 3, 1860.—The nature of this invention is explained by the claim and engravings.

The inventor says: I *claim* the relative arrangement of the powder magazine A, the ball magazine C, and the sliding breech D, for the purposes of a breech loading gun, substantially as set forth.

I claim so arranging the valve R, in relation to the barrel B and stock G, that when the barrel is unscrewed in the act of loading, the said valve will open automatically, and when the barrel is turned back to its place the said barrel will close automatically and fit tightly over the mouth of the tube, thus preventing all danger of igniting the powder in the magazine by the discharge of the gun, substantially as described.

No. 26,735.—**JOHN S. GRAY**, of Hartford, Conn., assignor to himself and **DAVID LYMAN**, of Middlefield, Conn.—*Improvement in Washing Machines*.—Patent dated January 3, 1860.—This invention consists in securing a roller arrangement to a washing machine in an adjustable and detachable manner, so that it may be entirely removed from the machine without removing any fastenings, or so that it may remain attached to the machine and be turned over out of the way, while the washing is performed.

Claim.—The combination of the rollers C C with the turning frame B, having proper forked or slitted projections to secure the roller frame to the tub or box, when arranged and operating substantially in the manner and for the purpose described.

No. 26,736.—**JAMES A. HAMER**, of Reading, Pa., assignor to himself and **NORRIS MARIS**, of Kimberton, Pa.—*Improvement in Brick Moulds*.—Patent dated January 3, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the interposition of vulcanized rubber, or its equivalent, between the ends and sides of the mould, substantially as and for the purposes set forth.

Second. The combination and arrangement of the cams *ff*, levers or arms E E, inclines *a*, and grooves *b*, with the sides and ends of the mould, substantially as and for the purposes set forth.

Third. The secondary cams *g g*, in combination with the outer division pieces of the mould, as and for the purposes set forth.

No. 26,737.—**PETER HINDS**, of Cedar Run, Pa., assignor to himself and **W. VAN NAME**, of said Cedar Run.—*Improvement in Cant Hooks*.—Patent dated January 3, 1860.—This invention consists in attaching the hook to the handle in such a manner that the hook and handle may be used when required in the ordinary way, and when the hook is not designed

for use; the latter being capable of being so adjusted as to be out of the way, and the handle used as an ordinary lever.

Claim.—Attaching or connecting the hook C to the handle A, by means of the socket D, the hook being provided with the curve *a* at one end, and the ledges *c* at its centre, substantially as shown, to admit of the two adjustments of the hook, for the purpose specified.

No. 26,738.—THOMAS E. HUNT, of Louisville, Ky., assignor to HUNT, BRAWNER & CO., of said Louisville.—*Improvement in Grinding Mills.*—Patent dated January 3, 1860.—This invention relates to the combination of two annular spring cushions, and their arrangement with reference to the revolving upper portion of the mill, so as to give it an elastic or yielding action in relation to the stationary part.

Claim.—The combination of spring *o o* with the cutting blades M, in the manner and for the purpose substantially as set forth.

No. 26,739.—FRANKLIN W. WILLARD, of New York, N. Y., assignor to E. G. ALLEN, of Boston, Mass.—*Improvement in Coal Retorts.*—Patent dated January 3, 1860.—The nature of this invention will be understood by reference to the claim and engravings.

The inventor says: I *claim*, first, the construction of coal oil retorts with internal false or extra heads at either end of the retort, and held at proper distances from the head proper by means of stays or studs, as described, the intervening space between each of the false heads and the end of the retort being filled with clay or other non-conducting material, substantially in the manner and for the purposes specified.

Second. The use of the circular plate *r* hung upon the false head *p*, and operating as described.

No. 26,740.—MARCUS A. WINHAM, of San Juan, Cal., assignor to I. B. Low and F. SMITH, of said San Juan.—*Improvement in Valve Chests for Hydraulic Mining.*—Patent dated January 3, 1860.—This invention consists of a box constructed of wrought or cast iron, the front being pierced with two holes *a a*, of six inches diameter, provided with projecting nozzles, to which flexible hose of canvas or India rubber are to be attached.

Claim.—The arrangement for controlling by means of a chest or distributor, provided with suitable gates, valves or stopcocks for the purpose of cutting off the water employed in hydraulic mining, substantially in the manner as described and set forth in the specification.

No. 26,741.—JOHN WRIGHT, of Sheffield, England, assignor to JAMES CHESTERMAN, of said Sheffield.—*Improvement in Tempering Steel.*—Patent dated January 3, 1860; patented in England October 17, 1857.—The claim and engravings explain the nature of this invention.

Claim.—Preparing strips of steel for hardening and tempering by drawing the same through a metal or fire-clay tube, heated in a furnace, constructed and arranged to operate substantially in the manner and for the purpose set forth.

No. 26,742.—HENRY H. BEACH, of Philadelphia, Pa.—*Improvement in Grain Winnowers.* Patent dated January 10, 1860.—The nature of this invention is explained by the claim and engravings.

Claim.—The arrangement of such a shoe when the steps thereof are made movable in such relation to the fan that the grain passes from the first step at a point from which its gravity would cause it to fall in advance of the fan, and where it is exposed to the greatest strength of the blast, in the manner and for the purpose set forth.

No. 26,743.—LEVI A. BEARDSLAY, of South Edmeston, N. Y.—*Improvement in Hop Frames.*—Patent dated January 10, 1860.—The sliding box K consists of two side plates with rollers, which bear upon the side of the strips G G, so as to facilitate their motion, and to lessen the friction. The box is also furnished with rollers, which are rotated by a lever or crank, and upon which the chains attached to the yokes are wound in tightening the wires.

Claim.—The employment of the frame holder composed of a sliding box K, with a windlass or roller to tighten the wire, and a vertical bed or strip G to guide or support the box K, substantially as and for the purpose shown and described.

No. 26,744.—JAMES B. BLACKSLEE and S. S. MIDDLEBROOK, of Newtown, Conn.—*Improvement in Machinery for Felting Hat Bodies.*—Patent dated January 10, 1860.—This invention consists in so combining, moving, and arranging two endless platforms or aprons, in relation one to the other, that when a number of hat bodies are placed between the said platforms, they (the hat bodies) shall receive a pressing rotary motion, which is also progressive, whereby they become properly felted.

Claim.—The combination of the endless rotating platforms *b* and *b*¹, when the same are ar-

ranged so as to move in opposite directions and at varying speeds, in the manner and for the purpose as herein fully set forth.

No. 26,745.—THOMAS BOARD and C. N. AUSTIN, of Jackson Court House, Va.—*Improved Mortising Tool*.—Patent dated January 10, 1860.—This invention relates to an improvement in the combined auger and chisel tool for forming rectangular holes or mortises at a single operation.

Claim.—The combination of the auger C and hollow chisel G, with the screw shaft A, nut D, bars E E H H, and I I J J, arranged substantially as and for the purpose set forth.

No. 26,746.—R. B. BROWN, of Cambridge, Vt.—*Improved Sawing Machine*.—Patent dated January 10, 1860.—This invention consists in a novel way of operating the log carriage in connection with a double edged saw, whereby the saw is made to cut during both movements of the carriage.

The inventor says: I *claim*, first, operating the carriage G by means of the pawls G¹ H connected with the adjusting lever I, and actuated from the saw sash B through the medium of the link h, arm g, rockshaft M, levers L J, and rod K, substantially as shown and described.

Second. The wheels j j, when attached to the yielding bar N, and arranged to operate as described, for the purpose of keeping the work from the saw as it is cut from the log.

No. 26,747.—JOEL BRYANT, of Brooklyn, N. Y.—*Improvement in Journal Boxes*.—Patent dated January 10, 1860.—The inventor says: My axle or journal boxes may be made of any desirable size or number of rollers R, so set within the said boxes as to rest and roll on the central base B, without coming in contact with the axles or journals X, on which the journal boxes are set.

Claim.—The construction and use of friction roller journal boxes, when made with a central base B, substantially as described.

No. 26,748.—JAMES BULLOCK, of Baltimore, Md.—*Improvement in Horse Collars*.—Patent dated January 10, 1860.—This invention consists in making the supporting part of horse collars of duck cloth and with leather bearings for the irons of the harness. The duck cloth is made into a sack, and stuffed with fine straw, and then sewed upon the rim or leather portion of the collar.

Claim.—A horse collar having its shoulder and neck-relieving portion A A made throughout of duck cloth, and without a side seam, and mounted with leather B C, and otherwise constructed after the method described for the purpose described.

No. 26,749.—LYSANDER BUTTON and ROBERT BLAKE, of Waterford, N. Y.—*Improved Hose Coupling*.—Patent dated January 10, 1860.—M and F are the male and female parts of the coupling; A the nozzle, upon the end of which is a screw thread taking into a thread, upon the inside of part M, and the joint is set up simply by turning the nozzle.

Claim.—Combining with the male and female parts M and F, a closing pipe having an end-wise motion through one of said parts, substantially as set forth.

No. 26,750.—NATHAN CHAPMAN, of Mystic River, Conn.—*Improvement in Cotton and Hay Presses*.—Patent dated January 10, 1860.—The nature of this invention is explained by the claim and engraving.

The inventor says: I *claim* a movable cotton press, constructed substantially as described, when operated by toggle links in combination with the pinion J and racks I I working or passing through the blocks H H, arranged to work or traverse between ways, substantially as described.

In combination with the doors T T, constructed as described, I claim the arms Z Z for closing and holding the doors closed, substantially as described.

No. 26,751.—JAMES M. CLARK, of Philadelphia, Pa.—*Improvement in Flour Mills*.—Patent dated January 10, 1860.—This invention consists in the combination of a main grinding and a regrinding mill, with two or more bolts, and a series of valves and apertures.

The inventor says: I *claim*, first, the arrangement of the centre elevator E, one trunk of which passes into the bolt chest, and when so arranged the combination of said elevator with the bolts B and C and conveyor K, as set forth.

Second. I also claim one continuous bolt chest L, containing two separate reels placed in a line, or end to end, in combination with the centre elevator E, as set forth.

No. 26,752.—R. M. CURTICE, of North Adams, Mich.—*Improvement in Cider Mills*.—Patent dated January 10, 1860.—This invention consists in combining with the ordinary

fluted cylinders previously used for crushing apples, a spheroidal toothed cutter or grater placed within a suitable hopper. It also consists in using, in connection with the fluted cylinders, the clearers G so arranged as to free the interstices of the cylinders from the crushed apples.

Claim.—The combination of the spheroidal cutter C and fluted cylinders E E arranged to operate substantially as and for the purpose set forth.

No. 26,753.—D. DE FORREST DOUGLASS, of Springfield, Mass.—*Improvement in Artificial Legs.*—Patent dated January 10, 1860.—The claim and engraving will explain the nature of this invention.

The inventor says: I *claim*, first, the piece *e* applied in combination with the stop *c* to pass between the said stop and the front part of the thigh piece, substantially as and for the purpose set forth.

Second. The employment of a mortise and tenon ankle joint *g h h* constructed as described, in combination with a spring applied substantially as described, for controlling the action of the foot and toe.

No. 26,754.—AUGUSTUS ECKERT, of Dayton, Ohio.—*Improvement in Pulmonometers.*—Patent dated January 10, 1860.—This invention consists in furnishing the bottom of the inner or measuring cylinders C with a close compartment, which surrounds the same, for the purpose of steadying said cylinder in its motion, and causing it to remain stationary at any point to which it has been blown up, so as to indicate with accuracy the vital capacity of the lungs.

Claim.—The application of the buoy E to the bottom of the floating chamber C for the purposes, and substantially as set forth.

No. 26,755.—HOWELL EVANS, of Philadelphia, Pa.—*Improved Inkstand.*—Patent dated January 10, 1860.—The nature of this invention is explained by the claim and engraving.

Claim.—The reservoir B with the cup-shaped mouth *a*, constructed substantially as described, and so hung to any suitable standard A, and arranged in respect to the screw or screws *h*, or their equivalents, that by operating the said screw or screws the reservoir will be so tilted on the stand as to cause the ink to flow either to or from the cup-shaped mouth, for the purpose specified.

No. 26,756.—H. B. FAY, of New York, N. Y.—*Improvement in Stoves.*—Patent dated January 10, 1860.—This invention consists in combining a wood and a coal burning stove in such a manner that either kind of fuel (wood or coal) may be used as desired.

Claim.—The arrangement of the coal fire-chamber B within the body or case A, the flue *d* and the pipes *e f*, communicating respectively with the smoke pipe F and the interior of the case A, for the purpose specified.

No. 26,757.—E. P. FURLONG, of Charlestown, and THOMAS LEAVITT, of Malden, Mass.—*Improvement in Weighing Apparatus.*—Patent dated January 10, 1860.—As the lever *a* is depressed, by placing any substance in either scale pan *b* or *c*, the index finger is raised and the shaft *i* partially rotated, thereby raising the adjustable weight *q* and bringing it nearer to the fulcrum of the lever *e*.

Claim.—The arrangement of the weight *q*, operating substantially as set forth, in combination with a weighing mechanism, for the purpose specified.

No. 26,758.—ISAIAH W. GILL, of Exeter, N. H.—*Improved Rig for Reefing Fore and Aft Sails.*—Patent dated January 10, 1860.—The claim and engraving explain the nature of this invention.

Claim.—The arrangement and application of the sail gaff and cross-trees with respect to the mast and the main boom sail and gaff, and not only providing the extra sail with furling lines or devices, but the main gaff with appliances by which it may be made to operate with respect to the mast, all substantially as specified.

No. 26,759.—SAMUEL H. GILMAN, of New Orleans, La.—*Improvement in Furnaces for Burning Bagasse.*—Patent dated January 10, 1860.—This invention consists in combining with a furnace, adapted to the burning of bagasse, an auxiliary furnace or fire chamber G adapted to the burning of wood, coal, or other suitable dense fuel, and made to communicate with the bagasse furnace A, so that the products of combustion of the wood, coal, or other dense fuel shall be made to pass through the furnace or chamber in which the bagasse is consumed.

The inventor says: I *claim* the combination of an auxiliary fire chamber for burning wood, coal, or other suitable dense fuel, with the bagasse fire chamber, substantially as and for the purpose set forth.

And I also claim so combining the auxiliary furnace and its ash pit with the bagasse

furnace that both the fire chamber and ash pit of the auxiliary furnace shall communicate freely with the bagasse fire chamber, substantially as and for the purpose specified.

No. 26,760.—GEORGE GOEWY, of Philadelphia, Pa.—*Improvement in Grain Fans*.—Patent dated January 10, 1860.—The sieve L, which may be made wholly of metal or wood, consists of a series of double inclined slats; each one of these slats presents three portions, to wit: an upper portion of about one third the width of the slats, inclining upwards in the direction of the blast; a middle portion, of about one third the width of the slat, being flat, on a line with the frame of the sieve; and a lower portion, of about one third the width of the slat, inclining downwards towards the blast, in a line parallel with the upper or first-mentioned portion.

Claim.—The employment of a sieve constructed as shown and described for the purpose of cleaning grain.

No. 26,761.—GEORGE P. GORDON, of New York, N. Y.—*Improved Printing Press*.—Patent dated January 10, 1860.—The claim and engraving explain the nature of this invention.

The inventor says: I *claim* the combination of the rotating, reciprocating, inking roller frame, moving as described upon a centre with the type or form bed, when such centre and such bed shall always retain their relative positions toward each other; also the above combination in combination with the rotating ink distributing table.

Second. I claim the combination of the rotating, reciprocating, inking roller frame, or equivalent, with the impression cylinder arms, or their equivalents.

Third. I claim the rotating, reciprocating cylinder arms, or their equivalents, for holding and carrying the impression cylinder, or its equivalent, in combination with the ways or bearers, or their equivalent, for causing the impression cylinder or scraper, or its equivalent, to move evenly over the tympan and type in giving the impression.

Fourth. I claim combining with an elastic tympan a flexible metallic back, or its equivalent, substantially as described for the purpose set forth.

Fifth. I claim the combination of a vibrating tympan with a vertical bed, or a bed placed out of a horizontal position, when the impression shall be given by a cylindrical surface.

Sixth. I claim the combination of a vibrating tympan, constructed substantially as described, with the impression cylinder, or its equivalent, for the purpose specified.

Seventh. I claim giving to a vibrating tympan its periods of motion and rest, for the purposes specified, during the continued motion of the other parts of the press, substantially as set forth.

Eighth. I claim, in combination with an impression produced by a cylindrical surface, the use of a rotating ink distributing table.

No. 26,762.—SAMUEL D. HAILEY, of Jackson, Tenn.—*Improved Surveyor's Level*.—Patent dated January 10, 1860.—A is the horizontal tube; b is the socket that receives the staff holding the level; ee are the perpendicular tubes; dd are the floats which are moved freely in the tubes by the fluid; rr are the rods projecting from the floats; ff are the sights; g is the movable sight to get the required grade.

The inventor says: I *claim*, first, connecting the vertical tubes to the horizontal tube by means of a yielding joint, in any manner, substantially as described.

Second. Combining a plumb and sights with the jointed tubes to keep them vertical, for the purposes set forth.

No. 26,763.—HALVOR HALVORSON, of Cambridge, Mass.—*Improvement in the Manufacture of Candles*.—Patent dated January 10, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The employment, in combination with the tubular wicks of the inner lining b of sized, starched, or glazed paper, or other sufficiently impervious material, substantially as and for the purpose described.

No. 26,764.—JAMES T. HAM, of Sinatobia, Miss.—*Improvement in Cotton Presses*.—Patent dated January 10, 1860.—The nature of this invention is explained by the claim and engravings.

Claim.—Inclining the press, as shown, for the triple purpose of allowing the sweep that turns the windlass under the end of the press to cause the ropes or chains to wind uniformly on the windlass without overriding or chafing, and to allow the former to run back by its own gravity and spread out the levers for the next operation, as set forth.

No. 26,765.—HATSEL HIGGINS, of Orleans, Mass.—*Improved Anchor Tripper*.—Patent dated January 10, 1860.—Within a port or recess c, formed in the bulwark rail d, is applied a rotary block or tripper D, of a prismoidal or other form, such block having a journal e extending from each of its ends and into a suitable bearing form d in or applied to the rail.

In connection with such block is used a holder for preventing it from revolving, except when desired.

Claim.—The rotary anchor fluke tripper and its holder applied and used substantially as and for the purpose set forth.

No. 26,766.—EDWARD HOLMES and BRITAIN HOLMES, of Buffalo, N. Y.—*Improved Machine for Dressing Staves.*—Patent dated January 10, 1860.—The object of this invention is to plane split staves in such a manner that the grain of wood may not be cut crosswise of the stave, or that the stave may be dressed to its desired thickness and form, and at the same time retain the natural crooks and windings of the timber.

The inventors say: We *claim* the combination of the straight roller I, with the convex roller J, so as to allow the edge of the stave, as it passes into the cutters, to drop below the centre or highest part of the convex roller, or bed over which the stave moves, substantially as set forth.

Second. We claim the combination and arrangement of the straight roller I, and convex roller J, with the tilting frame C, (including the cutter,) for the purposes, and substantially as described.

No. 26,767.—THOMAS HOUGHTON, of Philadelphia, Pa.—*Improvement in Lamps.*—Patent dated January 10, 1860.—This invention consists in forming on the under side of the cap or cover of a lamp an oval or elliptical inclined flange *a*, arranged in respect to and adapted to an oval and inclined opening in the top or ferrule of said vessel, so that on inserting the oval projection into the oval opening, and turning the cap, the latter may be securely fastened to the ferrule and brought to bear on the same with a perfectly tight joint.

Claim.—The top of the ferrule A, with its oval and inclined opening, in combination with the oval and inclined flange or projection of the cap B, the said flange and opening being formed and adapted to each other substantially as and for the purposes set forth.

No. 26,768.—JOHN A. HOWLAND, of Providence, R. I.—*Improvement in Coal Sifters.*—Patent dated January 10, 1860.—This invention consists in arranging in the interior of a barrel a centre, supported by two or more arms that are attached to the inside of the barrel, which centre serves to support the sieve in such a manner that the latter can be rotated, and guided by the centre below and by the shank passing through a hole in the corner above.

Claim.—The combination, with the sieve D, of the centre plate *f*, centre *g*, boss C, and shank E, as and for the purpose shown and described.

No. 26,769.—GEORGE W. HUBBARD, of Meriden, Conn.—*Improved Molasses Gate.*—Patent dated January 10, 1860.—This improvement consists in so constructing and affixing the two parts together that the covering part will be always parallel to the face of the tube or stem when closed, whereby all leaking is prevented.

Claim.—Making the covering part adjustable, by means of the spring at each end, in the manner and for the purpose described.

No. 26,770.—JOHN W. HUDSON, of Lafayette, Ind.—*Improvement in Seeding Machines.*—Patent dated January 10, 1860.—The object of this invention is to obtain a machine that may be used both as a roller and seeding machine, both functions being performed at the same time, or, by a simple adjustment, either performed separately.

Claim.—The teeth or share D, provided with seed receptacles *h*, fitted on the rods *a*, as shown, provided with seed slides *o*, and arranged to operate substantially as and for the purpose set forth.

No. 26,771.—JOHN LANE, of Lockport, Ill.—*Improvement in the Mole of Drain Ploughs.*—Patent dated January 10, 1860.—This invention consists in constructing the mole which forms the drain, so that the front half of its length first forms what may be termed a minor arch-shaped drain, with compacted side walls; and the rear half of its length following after abruptly, instead of gradually, converts the minor drain into a major drain, or a drain of the proposed size.

Claim.—The combination, with the peculiarly constructed mole A A¹, of the shoulders *c c*, which extend from the base of the mole slope backward as they rise, and terminate at a point about midway between the back of the stem or coulter and the rear end of the mole, substantially in the manner and for the purpose set forth.

No. 26,772.—ROBERT LARTER, JR., of Newark, N. J.—*Improvement in Apparatus to Feed Paper to Printing Presses.*—Patent dated January 10, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, simultaneously moving inward a series of friction pieces from near the edge of the pile of paper, while a corresponding series of legs are pressed upon the pile at points nearer the centre thereof, so as to cause the surface of one or more of the sheets at or near the top of the pile to rise in the space between the rubber and the legs, the upper one being raised more than the rest, and being thereby separated therefrom by a considerable stratum of air.

Second. I claim, in connection with hollow and vacuous legs G^1 , used in the manner substantially as shown, bevelling the basis of the legs to correspond with the inclined position assumed by the upper sheet C, under the action of the friction pieces M.

Third. I claim controlling the apertures between the hollow legs G^1 , or their equivalents, and a vacuous space; and also operating all the friction pieces M, or their equivalents, by a partial rotation of a trunk H, arranged substantially as and so as to produce the effects set forth.

Fourth. I claim allowing for variation in the height of the pile of the paper by providing slots, or equivalent "lost motion," in the connections F F^1 , or their equivalents, and determining the time of the rubbing action; and also the time of producing the vacuum in the legs G^1 , or their equivalents, by the contact of L, or an equivalent portion of the separating apparatus with the pile of paper.

Fifth. I claim elevating the front edge of the sheet, after its separation from the pile, and pressing the same against a series of tapes V, by a blast of air, arranged substantially in the manner shown, for the purpose of ensuring the forward motion of the sheet so soon as the vacuum in the legs G^1 is destroyed. I also claim, in combination therewith, effecting the complete separation of the upper sheet from the remainder of the pile by the deflection backward of a portion of the same air after its action on the front edge of the sheet, substantially as and for the purposes set forth.

Sixth. I claim securing a correct position of the front edge of the sheet by carrying it forward in advance of the time it is required to be delivered to the press, and by sliding forward the tapes or equivalent supports beneath it, while stops Q Q, or their equivalents, are presented to its front edge for the purpose of turning it into a correct position, if askew.

Seventh. I claim giving a side motion to the sheet to secure a correct position of one of its edges by a continuous movement of the rollers X, or their equivalents, as set forth.

Eighth. I claim reversing the side movement of the sheet so as to register, by either edge, at pleasure, substantially in the manner shown.

No. 26,773.—WALTER G. MACKAY, of New York, N. Y.—*Improvement in Ventilating Sinks, Water Closets, &c.*—Patent dated January 10, 1860.—The perpendicular soil pipe B is continued up into the pipe A, above the trap, which is beneath the basin. The ventilating pipe A may be extended out at the top of the house, or reach into a flue built in the wall.

Claim.—The application of the ventilating pipe A, at the upper bend of a bent pipe trap, and at its junction with the soil pipe B, in combination with said trap and soil pipe, in the manner and for the purposes specified.

No. 26,774.—ELI MANROSS, of Bristol, Conn.—*Improved Latch for Gates.*—Patent dated January 10, 1860.—A is a plate of metal firmly secured to the post and having on its surface a trough-like projection in which is imbedded a straight metallic spring B, resting upon its ends near the bottom of the trough; C is a movable catch or button turning upon the pivot D and pressing upon the middle of the spring B, within the trough.

Claim.—The latch for doors and gates, consisting of a movable catch retained in place by a spring, and acted upon by a slotted plate and projection, substantially in the manner and for the purpose described.

No. 26,775.—E. J. MCCARTHY, of New York, N. Y.—*Improvement in Machinery for Burring Wool.*—Patent dated January 10, 1860.—This invention consists in combining with the draw roller, the breast plate, and the stripper, a pair of feed rollers, the upper one of which is serrated for the purpose of holding one end of the fibre while the opposite end is held by the breast plate and feed roller, in order to produce a tension on the fibre so as to cause it to be drawn out by the stripping plate, and also bent downward over the edge of the stripping plate, at the end of its upward motion, and thus present it to the stripping plate in a thinner sheet and in such position that the burr is more easily removed.

Claim.—The combination of the feed rollers with the stripping plate and the draw roller, arranged substantially as described for the purpose set forth.

No. 26,776.—GEORGE A. MEACHAM, of New York, N. Y.—*Improvement in Buttons.*—Patent dated January 10, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, a button composed of the swelled or headed shank A A^1 , and outer rim B, so combined and arranged as to allow the rim to rotate and assume

various angular positions, without twisting or straining the cloth, or fastening around the shank while being buttoned or unbuttoned, substantially as set forth and described.

Second. The teeth *a*, arranged at the base of the shank *A*, substantially as and for the purpose set forth.

No. 26,777.—JOHN MINER and SILAS MERRICK, of New Brighton, Pa.—*Improvement in Iron Railroad Cars*.—Patent dated January 10, 1860.—This invention consists in constructing the panels which fill the spaces between the framework of the car, of a single piece of sheet metal of suitable thickness raised by the hammer or by dies, so that they are struck up in the centre, with an ornamented or plain raised concave from the interior of the car.

Claim.—The employment of panel plates composed of a single piece of sheet metal struck up (whether such raised parts be ornamented or plain) and secured to the framework, substantially in the manner and for the purposes described.

No. 26,778.—THOMAS MITCHELL, of Lansingburgh, N. Y.—*Improved Machine for Boring Brush Hooks*.—Patent dated January 10, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, attaching brush blocks *r* to the faces of a polygonal drum *E*, having an intermittingly rotating movement, an intermittingly longitudinal sliding movement, and a reciprocating feed movement, in connection with rotary drills *p p*, (one or more,) for the purpose of boring the blocks to receive the bristles.

Second. The arrangement of the racks *f g* on the cylinder *F*, plate *H*, bar *G*, connected with the grooved bar *h*, the stop bar *I*, and slide *C C*¹, operated as shown, and having the shaft *D* of the drum and cylinder fitted in them, with the weight *M* attached, for giving the necessary movements to the polygonal drum *E*, for the purpose set forth.

No. 26,779.—JAMES MONTGOMERY, of Baltimore, Md.—*Improvement in the Construction of Steam Boilers*.—Patent dated January 10, 1860.—The nature of this invention is explained by the claim and engravings.

Claim.—Making vertical, or nearly vertical, water tubes for steam boilers or other purposes with their lower ends, to which the heat from the furnace is applied at its lowest temperature, thicker for any desired portion of their length than their upper ends to which the heat is applied at its greatest intensity, in the manner and for the purposes substantially as set forth.

No. 26,780.—CAMPBELL MORFIT, of New York, N. Y.—*Improvement in Compositions for Coating Candles*.—Patent dated January 10, 1860.—The claim explains the nature of this invention.

Claim.—The covering of tallow, stearine, or other candles with paraffine or paraffine mixtures, substantially as set forth, for the purpose of hardening their surface and improving their appearance and burning qualities.

No. 26,781.—JOSEPH R. PALMENBERG, of New York, N. Y.—*Improved Frame for Ladies' Dresses*.—Patent dated January 10, 1860.—This invention consists in constructing ladies' figures in such a manner that the same may be readily taken apart when required to be packed in a box, so that they may occupy less room in transportation.

Claim.—The arrangement and construction of ladies' figures in parts, and the manner of fastening the separate parts together, substantially as described and for the purpose specified.

No. 26,782.—WASHBURN RACE, of Seneca Falls, N. Y.—*Improvement in Stove Registers*.—Patent dated January 10, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The application of the two damper plates *F F*¹ to the register plate *A*, when geared together, so as to open upward simultaneously from the apertures *E E*, situated at the bottom of the said register plate through the connection of the single clutch lever *G*, with the expansive rod *C*, in combination with said clutch lever and expansion rod, substantially in the manner and for the special purposes specified.

No. 26,783.—HENRY RASQUIN, of New York, N. Y.—*Improvement in Skate Fastenings*.—Patent dated January 10, 1860.—This invention consists in so constructing the lower part of the boot and the skating iron that they may be attached to each other without tying, buckling, or strapping.

The inventor says: I *claim*, first, providing the skating iron with two pins or wedges, substantially as described.

Second. Providing the boot or shoe with a groove *F* and with spring boxes *H* and *K*, substantially as described and for the purpose set forth.

No. 26,784.—ROBERT L. REANEY, of Philadelphia, Pa.—*Improvement in Gold Separators*.—Patent dated January 10, 1860.—This invention combines in one machine the following operations: grinding the gold quartz, or other mineral with which gold is found associated, and reducing the same to a pulverulent state, and washing and carrying off the light particles, which are mechanically held in suspension by a stream of water acting upon them in a peculiar manner.

Claim.—The arrangement of the case J, weight pan K, shaft I, rollers H H¹, central overflow tube B, and exit pipe L, as and for the purpose shown and described.

No. 26,785.—GEORGE W. ROBERTSON, of Philadelphia, Pa.—*Improvement in the Waste Cocks of Hydrants*.—Patent dated January 10, 1860.—This invention consists in so constructing the cock that the waste water, as it is discharged, shall be caused to wash the joint which is formed at the place of junction of the plug with the upper end of the barrel of the same.

Claim.—Causing the "waste water" of a hydrant, pave-washer, or other similar hydraulic apparatus, to wash the joint produced at the junction of the plug with the upper part of the barrel of the waste-cock thereof, substantially in the manner and for the purpose set forth and described.

No. 26,786.—F. W. ROBINSON, of Richmond, Ind.—*Improvement in Horse Powers*.—Patent dated January 10, 1860.—This invention consists in balancing the wheels F F¹ upon the pinion G, whereby much friction and consequent wear and tear are obviated.

Claim.—The peculiar arrangement of the pinions c, bevel gears C C, shafts D D¹, master wheel B, pinions E E¹, shafts e e¹, gears F F¹, pinion G, shaft H, cross bars J J¹ K L, as and for the purpose shown and described.

No. 26,787.—C. B. ROGERS, of Norwich, Conn.—*Improved Machine for Cutting Mouldings*.—Patent dated January 10, 1860.—This invention consists in the use of feed rollers and cutter heads arranged obliquely with the stick, in such a manner that the feed rollers will impart both a rotary and a longitudinal rectilinear movement to the stick, while the cutters will act on the stick in a plane obliquely with it, and cut the spiral bead or beads thereon.

The inventor says: I *claim*, first, the use of rotary cutter heads K K, provided with necessary cutters, and placed obliquely with the stick E, to be operated upon when said stick is fed between or underneath the cutters K K, with a combined rotary and rectilinear movement, for the purpose set forth.

Second. The combination of the feed rollers and cutter heads, arranged for joint operation as described.

No. 26,788.—WILLIAM SCHAUBEL, of Philadelphia, Pa.—*Improvement in Steam Boilers*.—Patent dated January 10, 1860.—This invention consists of a coiled flue G, and a chimney H, arranged within another casing A, in respect to the inner and outer casing C B of a fire chamber, and tubes I I, connected with the latter so as to form a steam boiler which presents an extensive heating surface in a small compass.

Claim.—The arrangement of the casing A, with its coiled flue G, chimney H, and the outer casing B, and inner casing C, and tubes I I, of the fire box.

No. 26,789.—J. A. SHEFFER, of Rochester, N. Y.—*Improvement in Coal Sifters*.—Patent dated January 10, 1860.—This invention consists in an arrangement of parts whereby the cinders are easily separated from the ashes without any danger of the dust being diffused in the apartment.

Claim.—The combination and arrangement of the rockshaft H R a a, and ways W W, with the riddle B, and containing box A, in the manner and for the purpose substantially as set forth.

No. 26,790.—ABRAHAM SCHULTZ and DAVID SCHULTZ, of Reading, Pa.—*Improved Washing Machine*.—Patent dated January 10, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The hexagonal rubber E, with the spiral cleats O O¹, on the periphery, as set forth, in combination with the cross brace B, and connecting rods M M¹, attached to one crank or eccentric for imparting a double concentric oscillating motion to the tub A, and the hexagonal rubber E, when constructed, arranged, and combined as and for the purpose described and set forth.

No. 26,791.—FRANKLIN SKINNER, of New Haven, Conn.—*Improved Machine for Cutting Shavings for Mattresses*.—Patent dated January 10, 1860.—This invention consists in the use of two face wheels, one to carry the block to be cut into shavings, and the other to carry the cutters, and in setting the faces of these in such relation to each other that the outer edge of

the cutters when the wheels are revolving will pass across the disk of the other wheel in the direction of its diameters, or through the longitudinal centre of the block, so as to cut a shaving from one half the width of the block at each revolution of the wheel.

Claim.—The combination of the two wheels B and D, or their equivalents, with their appendages, when the whole is constructed and made to produce the result substantially as described.

No. 26,792.—R. L. SMITH and C. SMITH, of Stockport, N. Y.—*Improvement in Machines for Finishing Leather.*—Patent dated January 10, 1860.—The object of this invention is to obtain a machine whereby the length of the stroke or vibration of the tool, as well as the pressure of the same on the leather may be regulated with the greatest facility. The face of the tool is also kept parallel with the face of the bed over which the leather passes, and the latter fed to the tool by an automatic mechanism evenly and with a regular movement.

The inventors say: We *claim*, first, the combination of the polishing tool L, with a horizontally moving stock I, and bar K, arranged and operating substantially as shown and described.

Second. The arrangement and combination of the vertical feed-regulating screw G, lever H, and bar E, as and for the purpose set forth.

Third. The arrangement of the horizontal feeding nut M, screw N, and shaft r, as and for the purpose shown and described.

Fourth. The combination, with the crank A and rod O, of the movable rack P, pinion and shaft p q, whereby the length of stroke of the polishing tool may be changed at pleasure.

No. 26,793.—SAMUEL M. SMITH and CALEB WINEGAR, of Union Springs, N. Y.—*Improvement in Drain Tile Machines.*—Patent dated January 10, 1860.—The pulverized clay empties into the screening box; from thence it is forced through the screens into the moulding box, and from thence through the tile moulds; the arrangement being such that while the clay is being screened at one end of the machine, pulverized clay is coming into the screening box at the other end, and screened clay is forced out through the tile moulds.

Claim.—The relative arrangement for united operation of the screening box B, tile making box C, screening plunger F, tile plunger G, eccentrics d e, for operating said plungers F G, pulverizing chamber A, and feeding shaft D, substantially as and for the purposes set forth.

No. 26,794.—JOHN SOUTHER, of Boston, Mass.—*Improvement in Apparatus for Evaporating Saccharine Juices.*—Patent dated January 10, 1860.—This invention consists in attaching a steam cylinder F to a car C, which is mounted on a track B B, raised above a train of sugar kettles A A, with a ladle J, suspended to the lower end of the piston rod I.

The inventor says: I *claim*, first, a portable steam ladle for bailing hot sugar cane juice from one kettle to another, or the finished sugar to the coolers, as described.

Second. I claim the ladle constructed with a valve in the bottom, to receive the cane juice or sugar, and a hollow handle or spout, through which the contents of the ladle are discharged, the outer end of said spout being suspended at a fixed height, substantially in the manner and for the purpose described.

Third. I claim the combination of mechanism described, substantially in the manner and for the purpose set forth.

No. 26,795.—SAMUEL SQUIRE, of Brooklyn, N. Y.—*Improvement in Hydrostatic Balances.* Patent dated January 10, 1860.—Any ponderable substance placed on the platform A communicates a force or pressure through the diaphragm B to the surface of the liquid, which liquid is thereby forced through the channel D up the column C until it has attained an altitude which exactly balances the weight of the substance placed upon the platform A.

Claim.—The diaphragm B, adjustable index scale E, fluid column C, and levers shown in figures 4 and 5, the whole constructed and arranged substantially as described.

No. 26,796.—J. K. STAMAN, of Mifflin, Ohio.—*Improvement in Cultivators.*—Patent dated January 10, 1860.—The claim and engravings explain the nature of this invention.

Claim.—In combination with the bows A and D, arranged relatively as specified, and having their lower ends chamfered as described, the cultivating teeth or shares P, and the connecting brace strap Q, when the whole is constructed and arranged as before set forth, for the purposes specified.

No. 26,797.—GEORGE A. STANLEY, of Cleveland, Ohio.—*Improvement in Machinery for Moulding Candles.*—Patent dated January 10, 1860.—The nature of this invention is explained by the claim and engravings.

The inventor says: I *claim* the mould box or sliding frame E E in a stationary frame A B, in combination with the tip stands H at the base of the stationary frame, by means of which, in the descent of the moulds, the candles are discharged therefrom, as specified.

Second. I claim drawing the wick into the mould by means of the jaws O P, and retaining the wick in its proper position in the mould, as described.

Third. I claim the blades X in combination with the plates upon the jaws P, for the purpose of severing the wick after it has been secured between the jaws O P.

Fourth. I claim the blade attached to the rack M, for the purpose of cutting off the butt end of the candles, and separating the sprue tallow from the bottom of the sprue box.

Fifth. I claim the candle rack Q Q¹ and R R¹, arranged and operating substantially as described, for the purpose of removing the candles after they are discharged from the moulds.

Sixth. I claim the described sprue box of adjustable parts—1st, to retain the tallow; 2d, to effect the removal of the sprue tallow, as set forth.

No. 26,798.—GEORGE A. STANLEY, of Cleveland, Ohio.—*Improvement in Machinery for Moulding Candles*.—Patent dated January 10, 1860.—This invention consists in the construction of devices by means of which the butt or large end of the candles are cut from the sprue and the sprue removed, and the candles discharged from the machine by means of the discharging rack, after the candles are out of the moulds.

The inventor says: I claim the arrangement of the blades E upon the bar D, for the purpose of cutting off the butts of the candles and scraping the bottom of the sprue box.

Second. I claim forming the ends and sides of the sprue box of the rectangular frame H F¹ G G¹, and removing the sprue tallow by means of the movement of this frame, as specified.

No. 26,799.—DAVID THAIN and WILLIAM JACKSON, of Philadelphia, Pa.—*Improvement in obtaining Fatty Matters from Residuum*s.—Patent dated January 10, 1860.—The steam and fatty vapor are eliminated from the acid bottoms by the heat of the still, and both pass together to the condenser, where they are condensed and caused to separate by the difference of their specific gravities.

Claim.—Obtaining the fatty acid and other fatty matter remaining in the acid bottoms by distillation, in contact with superheated steam, substantially as described.

No. 26,800.—R. B. THOMPSON, of Galesburg, Ill.—*Improvement in Tanning Compound*.—Patent dated January 10, 1860.—The composition is as follows: ten pounds root of the polygonum bistorta, two pounds root of the geranium maculatum, one quarter pound sulphate copper, one barrel weak solution catechu, tan bark, or hot water.

Claim.—The combination and use of the several ingredients, compounded in proportion as described, for the purpose of tanning leather from hides, as set forth.

No. 26,801.—LAURISTON TOWNE, of Providence, R. I.—*Improvement in Making Chains from Sheet Metal*.—Patent dated January 10, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim, first, forming that portion of the carrier in which the blank link is transported in such a manner that it can be made to turn on an axis which shall be coincident with the axis of the blank link upon it, substantially as described.

Second. The combination of the supplemental plate, or its equivalent, with a stop H or its equivalent, for the purpose of determining the extent of rotation which shall be given to the plate E, and thus insure the proper presentation of the blank to the chain, substantially as described for the purpose specified.

Third. I claim the mode of operation, substantially as specified, by means of which the punch N, stop E, and bending picks d d d, or their equivalents, are made to coöperate in alternate positions in relation to the forming tube, for the purposes set forth.

No. 26,802.—GEORGE J. WARDWELL, of Barnston, Canada.—*Improvement in Stone Dressing Machines*.—Patent dated January 10, 1860.—The nature of this invention is explained by the claim and engravings.

The inventor says: I claim the combination of a "stunner" and cutter together, or in the same instrument, the stunner preceding the cutter in its action both to "stun" the material for the cutter and to gauge the depth of its cut, substantially as described.

I also claim the arrangement of the shafts i and j of the band pulleys u s upon frames v p, distinct from and pivoted to the bed frames x r, so that said shafts may be brought to a horizontal position (nearly or exactly) when the machine is working in an inclined position, in the manner and for the purposes specified.

I also claim the arrangement and combination of the lever L, shipping frame M, pulleys G and p, shaft E, pinion I, feed finger k, stay finger b, and sword h², whereby the shipping frame and feed and stay fingers are operated by one and the same movement of the shipping lever, substantially in the manner and for the purpose specified.

No. 26,803.—**ARETUS A. WILDER**, of Detroit, Mich.—*Improved Clapboard*.—The object of this invention is to facilitate the painting, and to make a surface by so rounding or bevelling the edges that the building covered by this siding, clapboards, or ceiling, shall be completely washed by the rain, as will not be done by square edged siding.

Claim.—Rounding or bevelling the lower edge of clapboards, siding, or ceiling, for the purposes set forth.

No. 26,804.—**W. F. M. WILLIAMS**, of Augusta, Ga.—*Improvement in Bridle Bits*.—Patent dated January 10, 1860.—This invention consists in a combination of lever powers, so arranged as to operate on one or both jaws, (upper and lower,) at the discretion of the reins man.

The inventor says: I *claim* a bridle bit constructed in any manner substantially as set forth and shown.

Second. I claim combining sliding levers with two bars E F in the mouth, and adapting this construction to any bit now known, substantially as and for the purposes set forth.

Third. I claim the combination of an elastic I and leather strap J, connected as shown, with the circular sliding lever, and the bar in the mouth, in the manner set forth and shown.

No. 26,805.—**M. P. WILMARTH**, of Pawtucket, R. I.—*Improvement in Ring Spinning Frames*.—Patent dated January 10, 1860.—This invention consists in constructing the ring employed in the ring spinning frame with a narrow upwardly projecting rim *a*, arranged between the inner and outer margins of the face of the ring.

Claim.—The construction of the ring with the upwardly projecting rim *a*, substantially as described, for the purpose set forth.

No. 26,806.—**OLIVER D. WOODRUFF**, of Southington, Conn.—*Improved Meat Cutter*.—Patent dated January 10, 1860.—The nature of this invention is explained by the claim and engravings.

Claim.—The employment and arrangement of the revolving plate K within the case A A¹, with reference to the fingers *c* and cutters *a*, operating substantially in the manner and for the purpose described.

No. 26,807.—**EDWARD BAGOT**, of New York, N. Y., assignor to G. B. GORDON, of said New York.—*Improved Beer Measure*.—Patent dated January 10, 1860.—This invention consists in admitting the beer into the lower part of the measure and also pouring the beer from the lower part, by which arrangement the froth is prevented from forming in large quantities, and the froth that does form allowed to rise above the inner end of the discharge spout, so that it may subside without being discharged from the measure.

Claim.—The combination of the two pipes B C applied to the beer measure, as and for the purposes set forth.

No. 26,808.—**FRANCIS D. BALLOU**, of Abington, Mass., assignor to himself and J. L. NASH, of said Abington.—*Improvement in the Manufacture of Boots and Shoes*.—Patent dated January 10, 1860.—The upper, with the welt, is lasted by tacking, pegging, or nailing the edges of both welt and upper to the inner sole. The outer sole is then attached by sewing through the edge of the welt and edge of the outer sole, and the shoe is ready for trimming and finishing in the usual manner.

Claim.—Attaching, by sewing, the welt or strip of leather to the uppers of boots and shoes preparatory to lasting the same, thus enabling the work to be performed by sewing mechanism, substantially in the manner and for the purposes set forth.

No. 26,809.—**HENRY BELFIELD**, of Philadelphia, Pa., assignor to himself and JUSTICE COX, of said Philadelphia.—*Improved Latch for Sliding Doors*.—Patent dated January 10, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The handles D D jointed to the plates C C, with the spring latch G, or its equivalent, and the whole applied to a sliding door, substantially as set forth, so that the force applied to either of the handles for sliding the door open may be the means of detaching the latch from the jamb, as specified.

No. 26,810.—**THEODOR BLUME**, of Cincinnati, Ohio, assignor to himself and W. W. HAMER & Co., of said Cincinnati.—*Improved Machine for Facing Pulleys*.—Patent dated January 10, 1860.—The relative greater speed of the stone causes it to act very expeditiously and effectively, and to wear equally around its periphery, although of uneven grit or density. The weight of the hinged and gravitating frame F and of its contents, holds it firmly down to whatever height it may be adjusted by the nut G.

Claim.—The described arrangement of the grindstone A, hinged frame F, nut G, post H

spindles K K¹, and adjustable bearing L, the whole being constructed and combined in manner substantially as and for the purpose set forth.

No. 26,811.—SETH BOYDEN, of Newark, N. J., assignor to himself and H. H. JAKES, of said Newark.—*Improvement in Machinery for Forming Hat Bodies*.—Patent dated January 10, 1860.—This invention consists in placing directly in front of the picker a plate so bent or curved that its surface will have a certain relative position to the axis of the picker and the surface of the cone, and give such a direction to the fur, as the latter is thrown on it by the rapid motion of the picker, that the fur will be drawn properly on the cone by the exhaust or suction within it.

Claim.—The fur director or plate E, curved or bent, substantially as shown and arranged in relation with the cone B and picker D, to operate substantially as and for the purpose set forth.

No. 26,812.—GEORGE BRADLEY, of Paterson, N. J., assignor to JACOB ROGERS, of said Paterson.—*Improvement in the Cap Spinning Frames*.—Patent dated January 10, 1860.—This invention consists in the employment of a tube with a groove extending longitudinally along its exterior, in combination with a collar of corresponding form, and with a dead spindle and cap so arranged and operating, that while the combination is adapted to work as rapidly as the ordinary dead cap spindle, the bobbin is traversed without changing the position of the cap or tube.

Claim.—The combination of the grooved tube C c, and collar E E¹, with the dead spindle and cap A B, when the whole is operated substantially in the manner and for the purpose set forth.

No. 26,813.—WILLIAM B. CARD, of Sag Harbor, N. Y., assignor to himself and JOHN SHERRY, of said Sag Harbor.—*Improved Alarm for Drawers*.—Patent dated January 10, 1860.—This invention consists in a novel arrangement of levers and stops with a knob-arbor, and an alarm placed within a suitable case, and applied to a drawer or till, whereby the drawer or till cannot be illegitimately opened, or an effort made to thus open it, without an alarm being sounded.

The inventor says: I claim the slide I, arranged with the bar H, and knob-arbor or spindle J, levers F F G, and stop bar D, and used in connection with the alarm C, substantially as and for the purpose set forth.

I further claim the slide bar L, when arranged with the bar H of the slide I, in connection with the projection s on the underside of the counter or table M, as and for the purpose set forth.

No. 26,814.—ORRIL R. CHAPLIN, of St. Johnsbury, Vt., assignor to himself and O. G. HALE, of Waterford, Vt.—*Improvement in Mowing Machines*.—Patent dated January 10, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim making the cutter bar or holder E in sections hinged together, in manner and for the purpose substantially as specified.

And in combination with so making the cutter bar, I claim making the connection F of the tails of the cutters, in sections hinged together and to a connecting rod, essentially as described.

I also claim making each tooth l situated at the junction or joint of each two sections of the cutter bar in two parts hinged together, constructed and applied respectively to the two sections, as and for the purpose specified.

I also claim combining with the cutter bar made in sections, connected as described, a stiffener L constructed and made to operate, substantially as described.

I also claim combining the lever N and the shaft M together, and to the frames A and D, substantially as specified, in order that, by means of simultaneous movements of the lever in backward and lateral direction, the cutter bar frame may be elevated and the stiffener impelled forward at one and the same time.

No. 26,815.—LEWIS L. CHICHESTER, of New York, N. Y., assignor to HENRY G. EVANS, of said New York.—*Improvement in Cotton Gins*.—Patent dated January 10, 1860.—The nature of this invention will be understood by reference to the claim and engravings.

The inventor says: I claim, first, the employment or use of the flanged shaft P, arranged relatively with the roller E, guard plate G, screen H, and feed board I, to operate substantially as and for the purpose set forth.

Second. The combining in one piece of the guard plate G, screen H, and feed board I, substantially as shown for the purpose specified.

Third. The corrugated roller E in combination with the auxiliary smooth roller F and roller C, with or without the elastic surface D, arranged or disposed so that the roller F may

serve in the capacity of a stripper to the roller E, or both as a stripper and draw roller, as described.

Fourth. The employment or use of the discharging roller Q R, applied to the roller cotton gin, and arranged to operate substantially as and for the purpose set forth.

Fifth. The employment or use of the guard plate G, either vibratory or stationary, in combination with the rollers E F and B, substantially as set forth.

No. 26,816.—JOHN DICK, of New York, N. Y., assignor to himself and S. C. HILLS, of said New York.—*Improvement in Sewing Machines*.—Patent dated January 10, 1860.—This invention consists in the manner of applying two dogs, the one to move, and the other to prevent the backward movement of, the feed wheel, whereby the necessity of the application of a friction brake to the said wheel is dispensed with, and the said wheel, though secured against any tendency to turn the wrong way, is permitted to turn in the right direction with very little friction.

The inventor says: I claim, first, the combination of a feeding dog attached to a lever working on a fixed axle, on which the feed wheel rotates, and a retaining dog carried by an arm rigidly secured to the said axle, substantially as described.

Second. The combination with the lever which carries the feeding dog of a crank H, applied to slide across the end of a hollow shaft G, a lever I, applied within the said shaft, and connecting the said crank with a screw arranged transversely to the said shaft, and an index attached to the said screw outside of a dial attached to the exterior of the said shaft; the whole applied and operating substantially as described for the purpose set forth.

No. 26,817.—HENRY C. FOOTE, of Fredericktown, Ohio, assignor to himself and C. KILGORE, of Chattanooga, Tenn.—*Improved Combined Watch Key and Calendar*.—Patent dated January 10, 1860.—This invention consists in combining with a shield A an adjustable circular plate B; on the latter is inscribed the days of the months and days of the week, and on the former the days of the month, the whole forming an almanac which may be adjusted so as to readily indicate the day of the week or month.

Claim.—The combined calendar and shield as a new article of manufacture, the same consisting of a shield, circular plates, and split ring, as described.

No. 26,818.—FRANKLIN B. HUNT, of Cincinnati, Ohio, assignor to R. D. VAN DUERSON and IRA B. GIBBS, of said Cincinnati.—*Improvement in Mills*.—Patent dated January 10, 1860.—This invention consists in the employment of a reversible block Q, arranged in combination with a grinding cylinder J, and a shelling cylinder K, so that the mill can be arranged for shelling corn or grinding apples.

The inventor says: I claim, first, the reversible block Q, secondary frame M, and cylinder carrier F G H, constructed and arranged for the use of different cylinders, substantially as described.

Second. In combination with the above arrangement of parts, I claim the feed plates U, constructed and arranged to operate substantially as described.

No. 26,819.—JOSEPH I. KNIGHT, of Philadelphia, Pa., assignor to himself, THOMAS PATTERSON, and JAMES LYNDELL, of Bristol, Pa.—*Improvement in Corn Planters*.—Patent dated January 10, 1860.—This invention consists of an axle with a sleeve provided with ratchet wheels for operating the planting levers, and having a clutch box *d e*, operated by a lever F, connected to a catch *y* for operating a third ratchet wheel *q* on the sleeve, and also connected to a lever W on a shaft *x*, to which the plough teeth H for opening the furrows are hung, so arranged for joint action that the sleeve may be partially turned to its proper position on the axle, the plough teeth depressed or raised, and the clutch thrown in or out of gear by the operation of one lever.

Claim.—The axle C with the sleeve E, its ratchet wheels *ff*, operating the levers *h*, the clutch box *d e*, operated by the lever F, the latter being connected to a catch *y* for operating the ratchet wheel *p*, and also connected to the lever W on the shaft *x*, for operating the plough teeth H, when the whole of the parts are combined for joint action, as and for the purpose set forth.

No. 26,820.—WILLIAM P. PATTON, of Harrisburg, Pa., assignor to himself and WILLIAM MOYER, of said Harrisburg.—Patent dated January 10, 1860.—*Improved Stopper for Preserve Cans*.—This invention consists in the arrangement of a circular base or bottom piece, having its outer edge or circumference levelled, and a screw stem rising perpendicular in its centre, an annular India rubber cushion or gasket or cylindrical section, which passes over and encircles the upper part of the bevelled edge of the said base, and an annular wedge, which is adapted to bear by its outer inclined plane upon the inner side of the gasket, and cause the latter to expand as the said annular wedge is held concentric therewith, and forced towards the said base by means of a circular cap plate, which is adapted to traverse the screw stem of the base when rotated thereon.

Claim.—The peculiar combination and arrangement of the several parts A B C D, or their equivalents, substantially in the manner and for the purpose set forth and described.

No. 26,821.—WILLIAM SMITH, of Pittsburg, Pa., assignor to SMITH, PARK & Co., of said Pittsburg.—*Improvement in Railroad Car Wheels.*—Patent dated January 10, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* making railroad car wheels, having cast iron rims and hubs with a rim plate, either sinuous or otherwise, extending around and underneath the rim, the hub and rim being connected by wrought iron spokes, placed alternately at the outer and inner face or edge of the rim and hub, in the manner described, for the purpose of distributing the bearing or pressure of the spokes, so as to make it equal on both edges of the rim and hub.

Second. Making the cast iron rim of railroad car wheels with a sinuous rim plate cast in one piece with the rim, and extending around the inner face of the rim, the rim plate being so shaped that both of its edges (following its windings) are of equal length to each other, and also to the circumference of the outer face or tread of the wheel, for the purpose of securing an equal degree of contraction of the rim and rim plate, at the same time strengthening and bracing the rim and supporting the strain of the wrought iron spokes.

Third. Also the combination in railroad car wheels of a cast iron rim, having a waving or sinuous rim plate around its under or inner circumference, with a cast iron hub connected with the rim plate and rim by means of wrought iron spokes arranged alternately near the inner and outer face of the wheel, substantially in the manner described.

No. 26,822.—L. A. DOLE, of Salem, Ohio, assignor to himself and ALBERT R. SILVER, of said Salem.—*Improved Tool for Cutting Round Tenons.*—Patent dated January 10, 1860.—The end of the piece of wood on which a round tenon is to be cut is inserted into a hollow tube which has at its front end several radial rests and a radial cutter. The tool is revolved, and the stick, being fed forward on the rests, has a perfectly round tenon formed on it by the cutter, the length of the tenon being gauged by means of an adjustable stop at the rear end of the tube.

The inventor says: I *claim*, first, the arrangement of the flanged cylinder A, face plate D, radial rests *e e e*, and cutter *f*, in the peculiarly constructed adjusting ring C *g*, substantially as and for the purpose set forth.

Second. The combination of the right hand screw thread *k*, formed on the inner circumference of the flanged cylinder A, the left hand screw thread *l*, formed on the circumference of the gauge shank and the set nut F, substantially as and for the purpose set forth.

No. 26,823.—LEONARD ANDERSON, of Painesville, Ohio.—*Improved method of Hanging Reciprocating Saws.*—Patent dated January 17, 1860.—This invention consists in pivoting the upper end of the saw to a vertical sliding block, and the lower end to the short arm of a pitman rod, which has its fulcrum in a block sliding in a circular groove, so that the saw in its movement will have an alternate reciprocating and at the same time a vibrating motion, and be thrown back during its upward stroke, in order that the kerf may clear itself of saw dust.

Claim.—The combination of the saw B with the short arm J of the pitman H, pin R and slotted arc F, when the upper end of the saw moves in a right line, substantially as described, so that the saw will be carried backward during its upward stroke, but will descend on a vertical line, all as set forth.

No. 26,824.—ALBERT C. BABCOCK, of New Haven, Conn.—*Improved Curtain Fixture*—Patent dated January 17, 1860.—This improvement consists in so connecting an India rubber spring to the curtain roller that the curtain may be drawn down when desired, and detained in any desired position by the ratchet attachment, and be rolled up by the spring when desired.

Claim.—The combination of the long India rubber spring C with the curtain roller B, and its appendages, when the whole is constructed, arranged, and made to operate substantially as described and set forth.

No. 26,825.—ALBERT BAKER, of Appleton, Wisconsin.—*Improved Life-preserving Raft.*—Patent dated January 17, 1860.—This invention is a raft made in such a way that it can be readily taken to pieces and folded up in a very compact and portable shape, or put together in a few minutes. When put together it will occupy a large superficial area, and have great floating capacity, not easily upset, and will serve a useful purpose at sea or for pleasure purposes.

Claim.—The combination of extension beams C C with central beam A, ferrules D D, racks *b b*, pinions *a*, for operating each pair simultaneously, arranged in the manner and for

the purposes set forth, the whole being buoyed up out of the water by suitable bags F, as described

No. 26,826.—VINCENT M. BAKER, of Elkland, Pa.—*Improved Water Wheel*.—Patent dated January 17, 1860.—The water, in its passage through the scroll and wheel, strikes the parts *e* of the buckets C, and then acts against the parts *f*, the water striking the part *e* of one bucket, and then passing to the part *f* of a succeeding bucket, and thence into the wheel, the water, of course, having a greater speed than the wheel.

Claim.—The combination of the two series of buckets C D and scroll E, constructed and arranged substantially as and for the purpose set forth.

No. 26,827.—JESSE BATLEY, of Honeoye Falls, New York.—*Improved Machine for Directing Newspapers, &c.*—Patent dated January 17, 1860; antedated July 17, 1859.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement of type on slats connected together so that they may be moved successively through a machine, in the manner and for the purposes described and set forth, or any equivalent involving substantially the same principles.

Second. The combination and arrangement of lever X X, click *a*, and ratchet wheel *b*, with cog wheels R R, for the purpose of moving slats A A, in the manner and for the purpose specified, or any arrangement accomplishing substantially the same thing.

Third. The arrangement and combination of spring *j*, pulley *g h*, and belt *f f*, for the purpose of taking up slats A A, or drum P, as specified, or its equivalent.

Fourth. The adjusting springs *d d*, for the purpose specified.

Fifth I do not claim the pin O or lip 10, separately; but I claim their combination and arrangement in the manner and for the purpose specified.

Sixth. Moving apron Z, by means of cleat 5 and click 4, in the manner and for the purpose specified, or any arrangement substantially the same.

Seventh. Drawing or moving newspapers, or other similar documents, into a machine by finger bars I I and spurs 6, in the manner specified, or any arrangement accomplishing substantially the same thing.

Eighth. The arrangement and combination of arm J, pin 9, click K, and bars L and M, in the manner and for the purpose specified, or any arrangement substantially the same.

Ninth. The arrangement and combination of lever T, clicks *x* and *d y*, ratchet wheel U, pinions on shaft 1, cog wheels *z*, drums *p*, belts N, cleats *q*, &c., for the purpose of elevating boxes *r r*, in the manner and for the purpose described and set forth, or any arrangement accomplishing substantially the same thing.

Tenth. I claim the method described of securing type in type boxes by means of screw 12 and wedge block 13, as shown in figure 4.

No. 26,828.—SMITH BEERS, of Naugatuck, Conn.—*Improvement in Machines for Pulling and Cutting Cotton Stalks*.—Patent dated January 17, 1860.—This invention will be understood by referring to the claim and engravings.

The inventor says: I *claim* the construction, arrangement, and operation of the pulling wheels E E, whether provided with intermatching spokes *g g*, for cutting and crushing as well as pulling, or simply arranged for pulling, and either with or without the auxiliary cutting and cleaning knives, substantially in the manner and for the purposes specified.

I also claim the gathering wheels or rollers G G, constructed and operating as described, in combination with the pulling wheels E E.

No. 26,829.—AUGUST BICKEL, of Philadelphia, Pa.—*Improvement in Crutches*.—Patent dated January 17, 1860.—This invention consists in the combined arrangement of a series of spiral springs and an elastic strap with the top piece of a crutch, whereby the said top piece is rendered much more easy and less injurious to the user, than heretofore, and in making the lower end of said crutch elastic in the direction of its length by means of a spiral spring.

The inventor says: I *claim*, first, the springs *e e e*, and elastic strap *f*, in combination with the top piece *a*, the same being constructed, arranged, and combined together, substantially in the manner and for the purpose set forth and described.

Second. I also claim the application of the spiral spring *b*, to the lower end of the staff, in combination with the tube *b¹* and stem *c*, as and for the purposes set forth and described.

No. 26,830.—CHILLION F. BROWN, of Bridgeport, Conn.—*Improvement in Spring Rollers for Window Sashes*.—Patent dated January 17, 1860.—The engraving represents the spring roller, B is a metallic frame, to which the axis C is attached; upon this the metallic roller D revolves; E E are metallic springs, one end of each of which rests upon the cross bar F, of the frame B, and is secured to said frame by a rivet G, the springs being so shaped and attached that the whole arrangement will resemble one half of an ordinary elliptic spring.

Claim.—The combination of the frame B, in which the roller revolves with the two springs E E, substantially as described.

No. 26,831.—JAMES A. CAMPBELL, of Georgetown, Canada West.—*Improved Apparatus for Printing Addresses on Newspapers, &c.*—Patent dated January 17, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Printing addresses on the margin of newspapers simultaneously with the printing of the newspapers, by means of cells or boxes i, containing the addresses set up in type and conveyed to the form, or to the bed thereof, by means of an endless apron having an automatic intermitted movement; and this I claim independently of any particular form or kind of printing press, or means employed for operating the endless apron.

No. 26,832.—JOSEPH CARLIN, of Cumminsville, Ohio.—*Improved Horse Shoe.*—Patent dated January 17, 1860.—The dovetailed tenons or shanks *b c* of the toe B and calks C, respectively, fit corresponding mortises F in the under side of the base A, with sufficient play to enable them to be secured after insertion by driving in and clenching the keys G.

Claim.—The arrangement of the projections D, cavities E, dovetails *b c* F, and wedge-keys G, constructed and combined substantially in the manner and for the purpose set forth

No. 26,833.—VOSCO M. CHAFEE, of Xenia, Ill.—*Improvement in Ploughs.*—Patent dated January 17, 1860.—C is the reversible double flange plate landside; D is the mould board and share; E is the turning plate; H the stirrup to secure the weed fender G G¹ to the beam; I is a V-shaped notch that underlaps the point of standard F; O O are bolts to secure the landside to the standard; Q, a bolt to secure the landside to the handle B.

The inventor says, I *claim*, first, the double flanged reversible cutter landside, in combination with the peculiar shaped stand D, and bolts O O and Q, substantially as set forth.

Second. I also claim the arrangement of the turning plate E, in combination with the double flanged reversible cutter landside and bolts O O and Q, or their equivalent.

No. 26,834.—VOSCO M. CHAFEE, of Zenia, Ill.—*Improved Printing Press.*—Patent dated January 17, 1860.—This invention consists in the manner of feeding the cards, distributing the ink on the rollers, imparting power to the printing apparatus, working the inking rollers, and counting the impressions.

The inventor says: I *claim*, first, the adjustable card box R, constructed and arranged substantially as described.

Second. The slide T, in combination with the catch or feed plate U, constructed and operated substantially as and for the purpose specified.

Third. The grooved wheel G, in combination with the bolt *d*, and pitman J, all constructed and operating substantially as described.

Fourth. The sliding frame F, constructed as described, and working in a line parallel to the main shaft.

Fifth. The mechanism described, or its equivalent, for the purpose of imparting to the inking rollers a double longitudinal friction against each other.

Sixth. The combination of the ratchet wheel H¹, shaft J¹, arm L¹, and graduated plate K¹, in the manner and for the purpose specified.

Seventh. I claim communicating power to a printing press by means of a combination of a cam and sliding frame, when the main shaft to which the cam is attached is in a line parallel to the line of motion of the sliding frame, substantially as described.

No. 26,835.—SYLVANUS S. CLARK, of Manchester, N. H.—*Improvement in Hay or Straw Cutters.*—Patent dated January 17, 1860.—C C are the shear or cutter bars which are jointed at their lower ends and confined to the frame A, by means of a bolt or screw rod *o*, passing through the said bars and frame. The cutter bars are jointed at their upper ends to curved connecting rods D E, the other ends of the said connecting rods being in turn jointed to the lower ends of sectoral levers F G.

The inventor says: I *claim* the combination and arrangement of the crossed and connecting rods D E, the brake L, and the sectoral levers F G, applied to the supporting frame and the shear cutters or mechanism, substantially the same,

I also claim arrangement of the sectoral arms, brake, and connecting bars above the knives C C¹, and the mouth of the hopper, as represented.

No. 26,836.—GEORGE A. COX, of Brooklyn, N. Y.—*Improvement in Formers for Bonnet Fronts.*—Patent dated January 17, 1860.—The cross piece D is attached directly to a block E, the axis of which plays in a slotted upright F, so that by means of the screw G the former A can be raised or lowered, and may be adjusted longitudinally by moving it along the slot F.

Claim.—The use or employment of the former A, in combination with the frame composed

of the parts D E and F, when arranged and operated in the manner described and for the purpose specified.

No. 26,837.—BENJAMIN F. CRAIG, of Washington, D. C.—*Improvement in Hot Air Engines*.—Patent dated January 17, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The introduction into the cylinder of a hot-air engine of two separate bodies or currents of gaseous matter, one of which is much cooler than the other, and the hotter of which is controlled and limited by the action of the cooler and by the form and arrangement of the piston and cylinder to such an extent as that it does not come into contact with those working parts which its heat would injure, substantially as described.

No. 26,838.—PEARSON CROSBY, of New York, N. Y.—*Improvement in Filing Saws*.—Patent dated January 17, 1860.—This invention consists in the employment or use of a bar provided with an adjustable slide, a stationary clamp or holder in which the file is secured, and adjusting or gauge screws, the parts being so arranged that the sides of the teeth of the saw may be filed so as to form a set of equal width throughout the whole length of the saw.

Claim.—The bar A, with the slide B¹, transverse plate or file-holder C, provided with the file D, and the set screws E E, or their equivalents, to form a new and useful implement for the purpose set forth.

No. 26,839.—VALORUS DREW, of New York, N. Y.—*Improved Shade Fixture*.—Patent dated January 17, 1860.—The nature of this invention is explained by the claim and engravings.

The inventor says: I *claim*, first, the two cords C E, connected by the ring D, and arranged as shown, to wit: the cord C, passing around the roller B, and the cord E, provided with the eye F, and attached to the jamb of the window casing, substantially as and for the purpose set forth.

Second. The sliding journal *f*, fitted in the roller B, provided with the slot *e*, so arranged relatively with the journal *f*, as to admit of the adjustment of the same for the purpose specified.

Third. Attaching the shade G to the roller B, by means of the headed elastic rod *j*, fitted in the hem of the shade and secured into the groove or recess *g*¹ of the roller by means of the staples *h*, in connection with the tape H, provided with the knot *k*, as described.

No. 26,840.—EUGENE DUCHAMP, of St. Martinsville, La.—*Improvement in Scaffoldings*.—Patent dated January 17, 1860.—This invention is an improvement in hanging and supporting scaffolds for builders, painters, &c., so that the scaffold will be held or secured in a perfectly steady position near the building which is to be repaired, and at the same time so that the foot boards can be readily adjusted at any height required without using either ropes or nails for retaining the parts together.

Claim.—The arrangement and combination with the crossties F and poles A, of the adjustable brackets B and straps C, substantially as and for the purposes shown and described.

No. 26,841.—JOSIAH P. FITCH, of New York, N. Y.—*Improved Churn*.—Patent dated January 17, 1860.—This invention consists in providing a circular guard D, on the dasher staff just above the axis on which it swings, so that no cream shall be allowed a chance to get up into the space in which the dasher swings, and in arranging a hand rest on the handle, so that it may be adjusted to suit the height of different persons.

The inventor says: I *claim*, first, the curved guard F, arranged on the dasher shaft, and moving with the same, in combination with the peculiar shaped dasher and churn tub, in the manner and for the purpose described.

Second. The hand rest E, when made adjustable, in combination with the guard D, churn tub A, and dasher B, in the manner described.

No. 26,842.—WILLIAM FRANKLIN, of New Haven, Conn.—*Improvement in Pantaloons*.—Patent dated January 17, 1860.—The claim explains the nature of this invention.

The inventor says: I *claim* the combination of upright elastic ribs with the legs of the pantaloons, by means of a lining or its equivalent, by which the ribs are secured in place, in contradistinction to attaching them directly to the material which forms the surface of the legs of the pantaloons.

I also claim the combination of hair cloth or its equivalent with elastic ribs and with the legs of the pantaloons, in such manner that the direction of the hair is crosswise to the lengths of the ribs.

No. 26,843.—LEONARD GILLETT, of North Colebrook, Conn.—*Improved Method of Raising Water*.—Patent dated January 17, 1860.—B is a suction and force pump; C the piston; D is the piston rod; E is a weight secured to the piston rod; F are valves arranged in different parts; G is the pipe through which the water is forced or elevated, and crooked at the desired point, so as to discharge the water into the bucket; I H is the lever which connects the pump with the bucket; I is the bucket suspended to the long arm of the lever H.

Claim.—The arrangement, as described, of a pump B, weighted piston E, pipe G, self-discharging bucket I, and lever H, substantially as and for the purpose described.

No. 26,844.—AUSTIN S. HART, of Buffalo, N. Y.—*Improvement in Faucets*.—Patent dated January 17, 1860.—This invention consists in the formation of a chamber in the main body of the faucet to receive the end of the supply pipe, and the arrangement of a spiral spring and valve within said chamber, and a thumb screw in the top, and over the valve, so that the spring by its expansion will open the valve, and the thumb screw be used to close the valve and contract the spring.

Claim.—The arrangement of the spring C, valve D, and pipe B, within the chamber A, and screw E, above the chamber, for the purposes and substantially as described.

No. 26,845.—GEORGE G. HENRY, of Mobile, Ala.—*Improvement in the Manufacture of Oil from Cotton Seed*.—Patent dated January 17, 1860.—This invention consists in drying the cotton seed, to facilitate the separation of the hull and kernel, passing the dried seed through a mill to crack them, and then allowing them to fall upon a sieve or bolting cloth by which the hulls are separated from the kernels, and finally subjecting the latter to a heavy pressure to extract the oil therefrom.

Claim.—The improvement in the treatment of cotton seed by which oil, oil cake, and manure are obtained therefrom, in the manner and for the purposes substantially as described.

No. 26,846.—JAMES BUCHANAN HENRY, of New York, N. Y.—*Improved Method of Rivetting Boiler Plates*.—Patent dated January 17, 1860.—This invention consists in the use of plates with marginal portions, which are to form the laps of the joints and receive the rivets of a sufficiently greater thickness than the rest of the plates to compensate for the weakening effect of the rivet holes, when said plates are so lapped, that the same rivet passes through both plates in forming a joint.

Claim.—The use of plates with an increased thickness imparted to their edges, when said plates are so lapped that the same rivet passes through both plates, substantially as described.

No. 26,847.—JACOB HIBBARD, of Hermitage, N. Y.—*Improved Feed Water Apparatus for Steam Boilers*.—Patent dated January 17, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the rotating feed plug C receiving its water on one side and discharging it into the boiler on the other, the operation being performed by the continuous rotation of the plug, all in the manner and for the purpose substantially as set forth.

No. 26,848.—R. W. HILL, of Naugatuck, Conn.—*Improvement in Skeleton Skirts*.—Patent dated January 17, 1860.—This invention consists in placing an additional hoop attached in front to the lowermost hoop of a skirt made in any of the usual forms, and in the rear to one about two thirds of the height of the skirt from the bottom, cutting the intermediate hoops at an oblique angle, and attached to them at each point of intersection by a pin, or other joint allowing freedom of motion.

Claim.—Attaching to a hoop skirt, made in any of the usual forms, an additional hoop or hoops B placed obliquely to the rest, and united to them by flexible joints, substantially in the manner and for the purpose specified.

No. 26,849.—JOHN HIVELY, of Dayton, Ohio.—*Improvement in Flower Pots*.—Patent dated January 17, 1860.—This invention consists in the construction of a pot with an open bottom, provided with a flange on the inside and a loose removable bottom to lift the earth from the pot, and a wire screen fitted to the pot so as to protect the young plants.

Claim.—The combination of the pot A, flange B, and removable bottom C, either with or without the screen D, for the purposes set forth, substantially as described.

No. 26,850.—CHARLES W. KIMBALL, of Springfield, Mass.—*Improvement in Steam Gauges*.—Patent dated January 17, 1860.—This invention consists in supplying the steam gauge with an alarm, which may be set to sound, and sounded at any desired amount of pressure, and may be used either with or without a "tell tale," which indicates at any moment the highest pressure to which the gauge has been subjected since the steam was applied.

Claim.—The application to dial or clock-faced steam gauges of the cam, lever and wire, or their equivalents, for the purpose of giving an alarm, substantially as set forth

No. 26,851.—JOHN LARKIN, of Thibodeaux, La.—*Improvement in Evaporators for Sugar Pans.*—Patent dated January 17, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination with and within the pan B, or its equivalent, of the two independent series of swinging steam pipes, substantially as shown and described, so that while one series is elevated to be cleaned, the evaporating process may be continued with the other series, as set forth.

Second. The combination of the horizontal pipes A C by means of the arched series of pipes *e*, as and for the purpose set forth.

Third. The arrangement of the extremities of the supply pipes D E and A A¹ to slide one over the other when the said extremities are combined with the stuffing boxes *d d*¹ *b b*¹ attached to the pan B, substantially as shown and described, whereby expansion is allowed and leakage prevented, as set forth.

No. 26,852.—WILLIAM S. MACKINTOSH, of Pittsburg, Pa.—*Improvement in Oscillating Steam Engines.*—Patent dated January 17, 1860.—The nature of this invention is explained by the claim and engravings.

The inventor says: I *claim*, first, the within described arrangement for counteracting the pressure of the steam against the sides of the cylinder next the side pipe, by means of a piston or valve applied within the side pipe or steam chest, and connected by a system of levers with a pin, or its equivalent, arranged to press against the trunnion on the opposite side of the cylinder, substantially as described.

Second. Providing cavities near the exhaust ports of the side pipe and pipes or passages communicating between the said cavities and induction chamber, substantially as and for the purpose herein specified.

No. 26,853.—WILLIAM S. MACKINTOSH and JAMES HEMPHILL, of Pittsburg, Pa.—*Improvement in Oscillating Steam Engines.*—Patent dated January 17, 1860.—This invention consists in applying a piston, or its equivalent, to the trunnion, on the opposite side of the cylinder to that on which the steam is received, and in conveying steam to act upon the said piston or its equivalent.

Claim.—So applying the piston E in relation to the trunnion *a*, and so conveying steam to act upon the said piston that it may be forced by the pressure of such steam directly towards the end of the trunnion, to counteract the pressure of the steam against the opposite side of the cylinder, substantially as described.

No. 26,854.—CHARLES MCBURNEY, of Roxbury, Mass.—*Improved Apron for Printing Presses.*—Patent dated January 17, 1860.—This invention consists in covering the blanket with successive layers of canvas or cotton cloth and India rubber, and then covering it with an India rubber compound that will vulcanize all the materials employed.

Claim.—A blanket for printing machines, having a fibrous surface, as set forth, operating as described

No. 26,855.—THOMAS H. MCCRAY, of Pellico, Texas.—*Improvement in Presses.*—Patent dated January 17, 1860.—The key C is first inserted in one of the sets of notches *ffff* close to the inner extremity of the cam E, which is then put in motion, and forces the follower forward a distance equal to its throw or eccentricity. Then just before the outer extremity *b* of the cam escapes from the said key, another key or block is inserted in the next succeeding notches *ffff*, in front of the inner extremity of the cam, which then commences to act on it and performs another revolution.

Claim.—The combination of the keys C C, or their equivalents, movable to different notches or positions in succession with a revolving cam, substantially in the manner and for the purposes specified.

No. 26,856.—T. CATO McKEEN, of Nashville, Tenn.—*Improvement in Buoying Ships.*—Patent dated January 17, 1860.—This invention consists in furnishing the vessel with a strong metallic reservoir of a suitable capacity, which will serve to contain condensed air. The air is forced into this reservoir by suitable air pumps operated by the engine or by manual power. With this reservoir is connected a strong pipe or main, to which is attached branch pipes of any flexible material, which communicates with bags or buoys.

Claim.—The arrangement of the longitudinal main C running fore-and-aft the vessel, when employed in combination with the air reservoir A, central conducting pipe D, lateral branch pipes E, and bags F, as shown, so that the bags may be simultaneously inflated on both sides and along the whole length of the vessel, as set forth

No. 26,857.—WASHINGTON MORTON, of Friendship, Maine.—*Improvement in Reefing Fore-and-Aft Sails*.—Patent dated January 17, 1860.—This invention consists in the manner of arranging and applying a single reef line and its leading carriers *c c c*, together with respect to the reef band *b*, the foot rope *a* of the sail *C*, and the boom *B*; and in combining therewith a straining rope arranged and applied to the reef band and the boom, so as to relieve the outer carriers or leaders and their reef lines from the strain and wear of the sail while the latter is reefed.

The inventor says: I *claim* combining, substantially as described, a single reefing line and two sets of leading eyes together with one side of the sail, its reef band and front rope, the rope in such case not being carried through the sail.

And in combination or connection with the same, I claim the straining rope, arranged and applied to the reef band and the boom, substantially as and for the purpose specified.

No. 26,858.—ELI MOSHER, of Flushing, Mich.—*Improvement in Sap Conductors*.—Patent dated January 17, 1860.—This invention consists in arranging a sap conductor with two prongs or barbs *a a*, and with a sharp edge between said prongs, so that it can be driven into a tree at any place without causing any material injury to the tree, and at the same time the joint between the tree and the conductor be perfectly tight.

Claim.—A sap conductor provided with the sharp edge *B* and side prongs *a a*, as shown and described.

No. 26,859.—ADAM ODELL, of New York, N. Y.—*Improvement in Attaching Thills to Vehicles*.—Patent dated January 17, 1860.—The head of the clip-holder *A* is formed with a socket-like cavity, opening from the upper and back side of it. In this cavity is fitted the end of the thill irons *B*; these ends are cylindrical in form, and of such diameter as to nearly fill the cavity of the clip-holder, but are below the longitudinal axis of the thills, so that when in their seat in the clip-holder they form a hook-like connection, which is prevented from disengaging by means of a flat headed bolt *C*, secured by a nut and screw threads through the clip-holder, directly back of and against the cylindrical end of the thill iron.

Claim.—The use of the flat-headed bolt *C* in combination with the clip-holder *A* and thill iron *B*, made and operating in the manner and for the purposes set forth.

No. 26,860.—SAMUEL J. OLMSTED, of Binghampton, N. Y.—*Improved Machine for the Manufacture of Tin Ware*.—Patent dated January 17, 1860.—The nature of this invention is explained by the claim and engravings.

The inventor says: I *claim*, first, having the die-holding shaft *G* so constructed and arranged upon the step *F*, and in the slot of the standard *E*, as to allow the die *H* to be elevated or lowered, moved forward or backward and rotated, as set forth.

Second. I claim the so arranging of the shaft *J* within its supporting frame and boxes as to allow of its vertical and longitudinal adjustment, for the purposes described.

Third. I claim the rollers *R R¹ R²*, as combined with the setting down roller *Q* and the circular die *H*, constructed and operated as described, whereby I am enabled to "set down," "double seam," and "dish," or deflect the bottom of the ware at one operation and without removing the ware from the die, as set forth.

No. 26,861.—DU BOIS D. PARMELEE, of Salem, Mass., assignor to JOHN A. GREENE, of Beverly, Mass.—*Improvement in the Manufacture of Elastic Hollow Moulded Articles*.—Patent dated January 17, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Forming, in a permanent manner, the shape of such articles, by cementing sheets made of rubber, or its equivalent, or their compounds, to form a bag of a shape approaching that of the intended article, and arranging the same in moulds provided with a mouth or opening, and forcing there through and into the bag, air or any other fluid at the ordinary temperature, substantially as set forth.

No. 26,862.—ANSON H. PLATT, of Cincinnati, Ohio.—*Improvement in Soap*.—Patent dated January 17, 1860.—This composition is composed of the following ingredients: Finely shaved bar soap, borate of soda, and a chlorinated solution of soda, Labbarraque's solution of the chloride of soda being the most convenient for use; the whole to be mixed with rain water.

Claim.—The use of the ingredients and proportions thereof for a composition for soap, substantially as described.

No. 26,863.—T. C. RICHARDS, of Milwaukee, Wis.—*Improvement in Blowers*.—Patent dated January 17, 1860.—The nature of this invention is explained by the claim and engravings.

Claim.—A blower, composed of an inner cylinder and outer case, connected by leather or other flexible substance *C D*, arranged substantially as described, to form two or more chambers between them, such chambers being provided each with one or more inlet valves, to admit air from without, and with one or more outlet valves communicating with a common

discharge pipe, and the inner cylinder having a circular motion within the outer case without rotating on its own axis, all substantially as set forth.

No. 26,864.—JOHN RUSSELL, of Grampian Hills, Pa.—*Improvement in Harrows*.—Patent dated January 17, 1860.—The harrows A are made of any required size or material, and are provided with teeth on their under side; *d* represents a shield, which consists of a piece of metal, secured at one end to one of the harrows, the other end of which is bent; *a a* are bolts which pass through and secure the mitre joints of the several harrows together.

Claim.—The arrangement of triangular harrows A A A A and bolts *a a*, with the shield *d*, the whole being constructed as and for the purpose specified.

No. 26,865.—ALBERT M. SMITH, of New York, N. Y.—*Improvement in Pocket Match Safes*. Patent dated January 17, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, so constructing a portable or pocket match safe, for holding matches, to be carried in the pocket, that the matches will fall down by their own weight into a position contiguous to the hole or place they are to pass out at, whereby one at time can be extracted from it without opening the safe.

Second. I claim the arrangement, in combination, for pushing the end of the match out of the safe sufficient to take hold of it.

Third. I claim so constructing it and arranging a rough surface in such close proximity to the hole or place in the safe the match is to pass out at, that, after the match has been pushed partly out, by taking hold of it with the fingers and drawing it completely out it can at the same time be brought against the rough surface in the ordinary manner matches usually are to ignite them, so as to ignite it.

Fourth. I claim the construction and arrangement for keeping the matches from coming out of the safe while being carried in the pocket, substantially as described.

No. 26,866.—KIRBY SPENCER, of Minneapolis, Minn.—*Improved Seat for Water Closets*.—Patent dated January 17, 1860.—The operation is as follows: the sliding cover is moved to one side of the aperture in the seat, and held open by the pressure of the leg of the person sitting on the seat against the projecting handle.

Claim.—The combination and arrangement of the slot F F with the projecting handles with straight and bent shanks E and G, the bent plate G G¹, the combined groove A A, formed by the rabbeting B in the front and the groove A A in the top, the plate A, the panel *h h h h*, the chamber I, and the casement F M, constructed in the manner described and represented and for the purpose specified.

No. 26,867.—EDWARD P. TORREY, of Jersey City, N. J.—*Improvement in Ice Cream Freezers*.—Patent dated January 17, 1860.—This invention consists in arranging the beater with a rigid scraper on one side and with a series of smooth inclined slats on the other, in a cylindrical can, which, by means of a socket in its bottom and by a boss on its cover, forms the proper bearings for the stem of the beater, and which is provided with legs or projections at its bottom, fitting over a crossbar in the bottom of the barrel or tub in which the can is placed.

The inventor says: I *claim* the arrangement and combination within the freezing vessel of the rigid scraper E and the inclined beating slats C, so that the cream will be cut clean from the interior surface of the can, and as fast as moved will be whipped and lifted by the inclined slats C and spread over the surface of the can, as specified.

I also claim the arrangement and combination of the crossbar F with the bottom of the tub or barrel G and the bottom of the can A, as and for the purpose specified.

No. 26,868.—HIRAM TUCKER, of Cambridgeport, Mass.—*Improved Portable Roof Covering*. Patent dated January 17, 1860.—This invention is explained by the claim and engravings.

Claim.—As a new article of manufacture, the composite waterproof roof covering described, the same consisting of a central web and layers of waterproof mixture adhering to both sides thereof, one or both of which layers are covered with a film formed by the evaporation of a wash, substantially as described.

No. 26,869.—OLIVER E. WESTON, of Roxbury, Mass.—*Improved Printing Press*.—Patent dated January 17, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination, with the horizontally moving type bed B and platen N, (of a hand press,) of a horizontally moving frisket P, arranged and operated substantially as and for the purpose shown and described.

Second. I claim the combination of the inking apparatus and frisket P with the shaft F, substantially as and for the purpose shown and described.

Third. I claim the employment of the frisket as a "fly" for the sheets, substantially as shown and described.

Fourth. The employment, in combination with the platen and type bed, of the adjustable bearing screws m^1 , to equalize the force of the platen, as shown and described.

No. 26,870.—JOHN W. WHEELER, of Cleveland, Ohio.—*Improved Method of Elevating and Delivering Water from Wells*.—Patent dated January 17, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Operating the valve in the bottom of the bucket by the rear end of the trough, the lever actuating the trough being moved by the bucket, and the trough having a more rapid advance than the bucket, as set forth.

No. 26,871.—ENOS G. ALLEN, of Boston, Mass., assignor to HENRY O. ALLEN, of Malden, Mass.—*Improvement in Steam Gauges*.—Patent dated January 17, 1860.—The nature of this invention is explained by the claim and engraving.

Claim.—The use, in gauges for indicating the pressure of steam, or of other fluid, of a volute spring, the coils of which are of uniform thickness throughout, and which taper in width on one side only, in combination with the rubber disk or diaphragm, as set forth.

No. 26,872.—C. R. BELLOW, of Seneca Falls, N. Y., assignor to himself and ABRAHAM ORVIS, of Niagara City, N. Y.—*Improvement in Rope Making Machines*.—Patent dated January 17, 1860.—This invention consists in the manner of giving rotary motion to the strand bobbins, both upon their own axis and around the laying spindle.

Claim.—The arrangement of the internally toothed rack B, spur wheel D, driving shaft C, flying spindle E, toothed flanged flyers F, and bobbins d , in combination with and in the relation specified to the other described mechanism which controls the cord or rope after it is made, substantially as and for the purpose set forth.

No. 26,873.—S. G. CRANE, of Rochester, N. Y., assignor to himself and CONRAD B. DENNY, of said Rochester.—*Improvement in Friction Sash Supporters*.—Patent dated January 17, 1860.—The curvature of the spring gives it a slight projection from the edge of the sash, like the crown of an arch, while underneath a smaller curved spring c is placed, with the concave surface opposite that of b , so that their outlines produce the figure of an ellipse, and secured at one end, in the manner of b . This acts as an auxiliary to the main or bearing spring b , its free end supporting it in the centre and increasing its elasticity and force.

Claim.—The combination of the prime supporting spring b and auxiliary spring c , or its equivalent, applied to a sliding sash or window, substantially in the manner and for the purpose described.

No. 26,874.—DE GRASSE FOWLER and THADDEUS FOWLER, of North Branford, Conn., assignors to themselves, SAMUEL MALTBY, and GUSTAVUS R. ELLIOT, of North Branford.—*Improvement in Making Coated Iron Pins*.—Patent dated January 17, 1860.—This invention consists in finishing coated iron pins by a rolling and compressing operation, whereby the granules are crushed down to a perfect level and the pin rendered smooth and uniform throughout its entire length.

Claim.—Finishing coated iron pins by the rolling and compressing operation, substantially as specified.

No. 26,875.—WILLIAM H. GRAY, of Dover, N. H., assignor to LUTHER ROBINSON, of Melrose, Mass.—*Improvement in Power Looms*.—Patent dated January 17, 1860.—The nature of this invention is explained by the claim and engravings.

The inventor says: I claim, first, the employment, in combination with an upright shaft E, geared with the yarn beam, and a spring applied to the said shaft to act upon it longitudinally, in opposition to the tension of the warp, substantially as described, of a wheel I, a lever J, carrying a pawl w , and having an inclined face v , and a fixed stop x , or their equivalents, the whole applied and operating substantially as and for the purpose specified.

Second. Attaching the roller p to the lever H, by means of an oscillating frame p^1 , substantially as and for the purpose described.

Third. The rod q , furnished with a collar u , the spring r , and the strap s , applied in combination with each other and with the lay, and the peculiarly constructed lever J, substantially as and for the purpose specified.

No. 26,876.—FREDERICK S. OTIS, of Brooklyn, N. Y., assignor to A. B. CHAPMAN, of New York city.—*Improved Clasps for the Ends of Bustle Hoops*.—Patent dated January 17, 1860.—The clasp a is applied over the hoop, the teeth 33 penetrating the galloon; the tongue Q is

then turned around to the back, inclosing the end of the hoop, and the teeth 3 3 are turned down into this tongue 2, which holds the parts firmly in place.

Claim.—The clasp *a*, formed with the teeth 3 3, to penetrate the galloon, and confine the end of the tongue 2, when bent back around the end of the bustle hoop, as and for the purposes specified.

No. 26,877.—JOHN SLOAN, of Pittsburgh, Pa., assignor to E. H. DIERKER and WILLIAM WASSELL, of said Pittsburgh.—*Improvement in Distilling Apparatus.*—Patent dated January 17, 1860.—The nature of this invention is explained by the claim and engravings.

Claim.—The arrangement of the heating pipe *d*, condensing pipe *f*, conducting pipes *e f l* and *j*, stirrer *i*, and governor, in connection with the vessels *a b c* and *x*, when arranged and constructed substantially as described, for the purpose of distilling and brewing.

No. 26,878.—I. T. ALLEN, of New York, N. Y.—*Improved Bed Bottom.*—Patent dated January 24, 1860.—This invention consists in making an adjustable support rail, whereby the distance or bearing of the slats may be easily and readily changed to a greater or less distance from centre to centre, and also the length of the bars and the slats arranged and adjusted to the different widths of bedsteads.

Claim.—An adjustable elastic bedstead bottom, the crossbar *a*, angular shaped block *c*, screws *d*, or their equivalents, brackets *h*, elastic band *e*, and slats *g*, arranged substantially in the manner and for the purpose described.

No. 26,879.—C. BIXLER, of Rogersville, Ohio.—*Improved Lard Expresser.*—Patent dated January 24, 1860.—This invention consists in having a perforated box or strainer provided with a handle and having a pressure plate hinged thereto, the pressure plate being also provided with a handle which is slotted, and through which the handle of the strainer passes.

Claim.—The strainer *A*, and pressure plate *B*, connected by hinges or joints, and provided with handles *C D*, arranged as shown and described, to form a new and useful article of manufacture for the purpose specified.

No. 26,880.—D. C. BROWN, of New York, N. Y.—*Improved Churn.*—Patent dated January 24, 1860.—This invention consists in the arrangement of the two disks of wood or metal, one of which, *G*, revolves, while the other, *F*, is stationary, through and between which the fluid to be acted upon is passed. The disks have upon their inner faces a series of rings *a a a*, projecting inwards therefrom, and so arranged that the rings on the side of the disk *G* enter and revolve in the spaces between similar rings on the disk *F*.

Claim.—The disks *F* and *G*, in their combined action, having upon their inner sides the rings *a a a*, &c., all in the manner substantially and for the purpose specified.

No. 26,881.—JOHN H. BELTER, of New York, N. Y.—*Improved Bureau.*—Patent dated January 24, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the described specific construction and union of the sides and bottom of the drawers, whereby are obtained the advantages set forth.

Second. The described manner of locking and unlocking all the drawers by the lock of a single drawer and the spring *C*, or its equivalent.

Third. The springing catches *m*, combined and arranged relatively to the rigidly locked bar *D d*, or its equivalent, substantially in the manner set forth, so as to allow a drawer or drawers to remain free at pleasure after the single lock *F* has been locked, and subsequently to lock them, in the manner and with the advantages shown.

Fourth. The described combination and arrangement of the locking devices *d m*, and of the handle *I*, with the described construction of the drawers, for the purpose set forth.

No. 26,882.—THOMAS W. BROWN, of Boston, Mass.—*Improvement in Skates.*—Patent dated January 24, 1860.—This invention consists in constructing a skate, with grooved and plain runner bars connected only at two adjacent ends and to the foot rest by projections therefrom, through or into which either runner bar may be inserted endwise, and held by screws or other proper equivalent devices, the same being so that either bar may be arranged below the other as a person may desire either for skating with the grooved or the plain runner next to the ice.

The inventor says: I *claim* an improved skate as made with a reversible runner, one of whose opposite edges is plain, or not grooved, and the other fluted or grooved.

I also claim the improved mode of constructing a skate, viz: with the plain and grooved runner bars *a b*, connected only at their two adjacent ends, or as shown at *c*, and to the foot rest, by projections or brackets *C D*, so as to be movable relatively to such foot rest and reversible, substantially in manner and for the purpose as specified.

I also claim extending each of the brackets C D, from the upper bar of the runner down to the lower bar thereof, so as to support both of said bars, as described.

No. 26,883.—R. P. BUTTLES, of Mansfield, Pa.—*Improved Animal Trap*.—Patent dated January 24, 1860.—This invention consists in so arranging the bottom of the trap in connection with vertical rods extending upward from the bottom, that the tipping of the bottom B, caused by the entrance of the animal, will release the door and close the trap.

The inventor says: I *claim* the combination of the tipping bottom, the vertical rods and the sliding door, arranged substantially as described for the purpose as set forth.

I also claim arranging the points of suspension of the tipping bottom in such position as to require the animal to enter entirely within the trap before it is sprung.

No. 26,884.—THOMAS W. CARROLL, of Baltimore, Md.—*Improved Self Lighting Lamp*.—Patent dated January 24, 1860.—A A A is a pair of levers connected at the points F F G, the middle point being a roller; B B B is a slide notched on its edge for the purpose of taking hold of the fuse, and thereby to feed or push it forward when the lamp is to be lighted.

Claim.—The application of the lever and slide, as set forth.

No. 26,885.—LYMAN A. CLARK, of Bridgeport, Conn.—*Improved Nut Cracker*.—Patent dated January 24, 1860.—This improvement consists in making the nut cracker with one stationary jaw, in the concave surface of which the nut is to rest, and one movable or vibrating jaw, which is to be forced down by a cam lever acting on an inclined plane to crack the nut, and when the cam lever is raised the vibrating jaw will be thrown up by an appropriate double spring properly attached to it.

Claim.—The combination of the cam lever with the inclined plane, when these are combined with the vibratory and stationary jaws, and the whole is constructed, arranged, and made to operate substantially as described.

No. 26,886.—E. J. CRIDGE, of Troy, N. Y.—*Improvement in Cooking Stoves*.—Patent dated January 24, 1860.—*f* and *g* are registers or dampers in the sides and bottom of the stove to regulate the admission of cold air through the opening *h h* and *i i*, to supply the chambers *a a*, the damper *g* in the bottom of the stove being regulated by damper *f*, by the cogs or notches *k k k*, so that when the damper *f* is moved the damper *g* in the bottom is also moved.

Claim.—The arrangement of the dampers or registers *f* and *g*, or their equivalents, substantially in the manner and for the purpose set forth and described.

No. 26,887.—JOHN E. CRANE, of Lowell, Mass.—*Improvement in Wire Screens for Cleaning Cotton*.—Patent dated January 24, 1860; antedated July 24, 1859.—The claim and engravings explain the nature of this invention.

The inventor says: I wish it to be understood that the improvement in cotton cleaning trunks which I have invented, and desire to secure by letters patent, consists in the use of metallic screens in said trunks, when the said screens have been manufactured in such a manner as to remove the cracks, scales, and other adhesive roughness from their surfaces, substantially as set forth.

No. 26,888.—THOMAS CONNELLY, of Philadelphia, Pa.—*Improvement in Burners for Vapor Lamps*.—Patent dated January 24, 1860.—This invention consists of a plate *m*, so arranged within the flaring chamber *f*, as to form, with the latter, a narrow annular space through which the vapor must pass in a thin stream, exposed to the hottest part of the said chamber, thus imparting additional heat to the vapor and tending to reduce it to the best condition for illuminating purposes.

The inventor says: I *claim*, first, the combination of the annular perforated tube A, with the outer vapor tube G, its flared chamber *f*, and inner vapor tube D, when the said tubes are arranged in respect to each other and to the annular tube A, substantially as and for the purpose set forth.

Second. The plate *m* attached to the inner tube D, and arranged within the chamber *f* of the tube G, as specified.

No. 26,889.—WILLIAM CHESTERMAN, of Centralia, Iowa.—*Improvement in Coffee Pots*.—Patent dated January 24, 1860.—The object of this improvement is to arrange the pot so that the grindings can be taken out without the danger of mixing some of them with the liquid coffee, and this object is obtained by arranging the piston packed strainer in a separate movable cylinder, which can be withdrawn whenever it is desired. The air tube, which admits air to the pot, is covered by the same cover that covers the spout.

Claim.—The arrangement of the movable cylinder C, in combination with the pot A, cylinder B, and piston packed strainer F, substantially as and for the purposes described.

No. 26,890.—HENRY L. CAKE, of Pottsville, Pa.—*Improvement in Coal Screens.*—Patent dated January 24, 1860.—The invention consists in having the screen formed with one of its two series of bars, "broken" or "staggering;" that is to say, intersecting their cross-bars, or the bars of the other series, at such points that the row of "staggering" bars between two of the unbroken or continuous ones will be in line with the centres of the spaces between its adjoining rows.

Claim.—Casting the screen with "broken" or "staggering" bars B, and continuous bars A, substantially as and for the purpose set forth.

No. 26,891.—GEORGE N. CUMMINGS, of Meriden, Conn.—*Improved Catch for Spectacle Cases.*—Patent dated January 24, 1860.—This invention consists in producing two indentations with a proper tool, one in the forward part of the rim of the cover and struck from the inside so as to produce a protuberance on the outer surface, and the other of like character, also from the inside upon the rim of the box part.

Claim.—Forming a snap for metal boxes, such as spectacle cases, tobacco box, &c., by making corresponding indentations on the rim of the lid and on the side of the said boxes, in the manner and for the purpose set forth.

No. 26,892.—ISAAC T. CARPENTER, of Martin's Ferry, Ohio.—*Improvement in Machines for Grinding Apples.*—Patent dated January 24, 1860.—To grind apples the cylinders C C¹ are made to revolve with different velocities, one moving considerably faster than the other, so as to mash and also tear the apples as much as possible. The cylinders are made of wood and covered with a thin metallic sheeting *a a*¹, which is punched with a great number of small holes, the rough and ragged projections of which will constitute the grinding surface of the cylinder.

Claim.—The application of a grater or metallic sheeting *a a*¹ to the cylinders C C¹, said sheeting being perforated or punched with small holes, the rough and ragged projections of which are placed externally and constitute the grinding surface of cylinders C C¹.

No. 26,893.—JOHN DONALDSON, of Rockford, Ill.—*Improved Separator for Hominy Mills.*—Patent dated January 24, 1860.—The object of this invention is to separate the hulls from the cracked or broken grain as the latter is discharged from the cracking apparatus, and consists in the employment or use of a fan and blast spout, screens, and a rigid and flexible board, arranged relatively to each other and the discharge opening of the stationary cylinder or shell, so as to effect the desired result.

Claim.—The arrangement of the vibrating board *f*, vibrating screen *i*, vibrating elastic board *g*, shell A, fan B, and screen *j*, as and for the purpose shown and described.

No. 26,894.—GEORGE W. PITTMAN, of Bushwick, N. Y., assignor to himself and WILLIAM C. BOONE, of said Bushwick.—*Improvement in Machinery for Laying Rope.*—Patent dated January 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Connecting two flyers in line by a central hollow journal, substantially as described, in combination with an arrangement of guides, substantially such as described, so as to carry the first strand from the first to the second flyer in a diagonal line, crossing the axis of rotation, whereby the several strands can be carried to the top with equal twist, as set forth.

No. 26,895.—CALEB S. DAVIS, of Harrisburg, Pa.—*Improvement in Machines for Finishing Cotton Goods.*—Patent dated January 24, 1860.—This invention consists in the peculiar arrangement of emery rollers, with partitions, in dirt chambers for cleaning and removing knots and dirt from cotton cloth, and in the arrangement and use of movable iron stretchers, each with right and left hand threads, for the purpose of laying the nap on the cloth and preserving its original width; also, in the application of steam by means of a steam chamber and calender roller for alternately dampening, bleaching and pressing, smoothing and drying the cloth.

The inventor says: I *claim*, first, the arrangement of the emery rollers and the cylinder brushes with the calender rollers, when either calender roller is filled with steam, substantially as and for the purposes specified.

Second. I claim the iron movable stretchers, the partial partitions in the dirt chambers, and the steam chamber into which passes a perforated pipe for the purpose of infusing steam into said chamber, the same being arranged substantially as and for the purpose specified.

Third. I claim the arrangement of the emery rollers with the partial partitions in the dirt chambers.

No. 26,896.—JACOB DUTCHER, of Gibson, Pa.—*Improvement in Self Acting Wagon Brakes*.—Patent dated January 24, 1860.—To the front axle A, and near each end of it, a rack E is attached; to the inner side of each rack E, a vertical plate F is attached. The plates are slotted longitudinally, and form guides for a shaft G, which is fitted in bearings b, at the back ends of brace rods c c, at the back part of the draught pole H. At each end of the shaft G there is a pinion c¹, and the pinions gear into the racks E E.

Claim.—The combination, with the pole H and axle A, of the racks E E and pinions c¹ c¹ as and for the purpose shown and described.

No. 26,897.—E. WOLCOTT DANIELS, of Springfield, Mass.—*Improvement in Machines for Picking Millstones*.—Patent dated January 24, 1860.—On the guide h a bar N is placed and allowed to slide freely; to this bar N a bar O is attached at right angles, and to the outer end of bar O, and to the bar g of frame L, a bar P is attached at right angles, and consequently parallel with N; in the bar O two screw rods Q Q are placed, which work in nuts R R, one of which is attached to the upright e, and the other to the upright f of frame L.

Claim.—The combination with the frame L of the additional frame, consisting of the bars N O P, and the shaft R, locking device l, pinions g g m m, and screws Q Q, arranged and operating substantially as described, for the purpose specified.

No. 26,898.—LINSON DE FOREST, of Derby, Conn.—*Improved Method of Manufacturing Wooden Mosaics*.—Patent dated January 24, 1860.—This invention consists in forming a composite block by cementing together slabs or blocks of regular or irregular geometric form of different varieties or color of wood, and then sawing or cutting the block into pieces and moving or sliding these pieces on each other a greater or less distance, so as to change the relation the different woods originally bore each other, and then cementing these pieces together, and cutting or turning the secondary block thus made to the required form.

Claim.—The method of arranging, dividing, rearranging, and uniting woods of different descriptions or different colors, substantially as described, for the purpose as set forth.

No. 26,899.—ELISHA F. EDWARDS, of Le Roy, Ill.—*Improvement in Wind Mills*.—Patent dated January 24, 1860.—When the mill is in operation the springs are wound up to the desired tension, the ratchets retaining them at the proper tension. If the breeze becomes stronger than desired, the portion of each sail which is furthest from the arm, on which it is free to turn, is forced round, and the edge of the sail thus presented more and more to the wind. The fusees e e e, from their structure, give the wind the advantage in deflecting the sails, and the spring in restoring them to their place again.

Claim.—The arrangement of sails a a a a, substantially as described, with the spiral springs, fusees, rods, and cords, in the manner and for the purpose specified.

No. 26,900.—HENRY W. FARLEY, of Hannibal, Mo.—*Improvement in Pressure Gauges*.—Patent dated January 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The lever L and weight W, or their equivalents, in combination with Burdon's pressure gauge spring S, in such a manner that the effect of any jar or external force upon the tube or spring S, when in action, shall, in all positions of the spring, be counterbalanced or neutralized by the effect of the same jar or external force upon the weight W, and the tube or spring be thus left to act undisturbed save by the pressure which is to be indicated, measured, or regulated by the gauge, thereby securing a more perfect operation of the gauge and constant correctness of the indicator.

No. 26,901.—WILLIAM L. GOLD, of Allegheny, Pa.—*Improvement in Steam Engines*.—Patent dated January 24, 1860.—This invention consists in so arranging and constructing the cranks or arms of the lifters and cam rods of puppet valve engines that they may be operated and handled with ease and speed by means of levers and connecting rods.

The inventor says: I *claim*, first, the flanges i on the reversing crank or arm h, and the projection t on the cam rod e, when used for the purpose of guiding the hooks 1 and 2 into their proper position on the wrists 3 and 4 of the reversing crank or arm h, as described and set forth.

Second. The use of the link m, or its equivalent, when used in connection with the cam rods f and g, reversing crank or arm h and the crank or arm l, as described and for the purpose set forth.

Third. The use of the connecting rods o and g, or their equivalents, when used in combination with the link m, cam rod e, and levers p and r, as described and for the purpose set forth.

No. 26,902.—SOLOMON S. GRAY, of Boston, Mass., assignor to himself and S. A. Woods, of said Boston.—*Improved Planing Machine*.—Patent dated January 24, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the combination of the feed rollers Q R, and bed B, when used in connection with the mechanism composed of the shaft L, provided with the pinions D f, and the lever O, provided with the pinions g, and the pinion l, on the roller R, arranged substantially as shown, so that, by a simple adjustment, either the feed rollers Q R, or the bed B, may be driven as occasion may require.

I further claim the manner, as shown, of attaching the roller frame P to the machine, to wit, by means of the joint or pivot k, so as to facilitate the adjustment of the rollers Q R, as specified.

No. 26,903.—JOEL B. HAYDEN, of Easton, N. Y.—*Improved Boot and Shoe Soles*.—Patent dated January 24, 1860.—This invention consists in making the entire outer sole for boots and shoes of sheet steel, formed and tempered so as to possess all the yielding qualities necessary for ease in wearing.

Claim.—The application of tempered steel for the outer soles of boots and shoes, as described.

No. 26,904.—WILLIAM WHEELER HUBBELL, of Philadelphia, Pa.—*Improvement in Projectiles for Fire-arms*.—Patent dated January 24, 1860.—The nature of this invention is explained by the claim and engravings.

The inventor says: First. I *claim* the construction of the holes k, and the diagonal holes j, so as to discharge the gas tangential to the cylindrical surface of the projectile, protected by the rear cylindrical surface m, and in this manner rotate the projectile in the gun without increasing the ordinary windage, as described.

Second. I claim forming the circular recess i, from the mouth of one diagonal hole j, to the other entirely around them, in combination with the holes k, and the cylindrical surface m, so as to facilitate the rotation in the gun in this manner, as described.

Third. I claim constructing the holes k and j, so as to discharge the gas tangential to the circumference opposite the corresponding faces d on the front, as shown, so as to have their reactive force of gas to coincide with the resistance of the faces, and in this manner operate with them to rotate the projectile in the same direction without rear grooves or increase of windage in the gun.

Fourth. I claim the expansible band m n, secured by the recess o, and flange p, on the back part of the projectile, or its equivalent, in combination with the vents j, so that the closing of the windage, by the band or ring behind the vents, shall compel a greater flow of gas to pass through the vents j, and increase their rotative action, as described.

Fifth. I claim the combination of the radial surfaces c, the curved surface d, the sectional surfaces a, and the cylindrical body f, with the flat rear h¹, so as to cause the longest practicable bearing and the least shake or angular position of the projectile in the gun and the rotation, and by this steady position and rotative action acquire a true line of flight.

Sixth. I claim the extension of the carrying cylinder r r to the back part of the projectile, in combination with the metallic striker x, the spaces 4 4 4 4, Fig. 8, and the rear side orifices v, so as to allow the projectile time to penetrate and the striker to effect its explosion.

Seventh. The flat sides or open spaces 4 4 4 4, Fig. 8, between the striker and the cylinder to allow the air to pass through from rear to front and front to rear of the striker to facilitate its effective action in the cylinder.

Eighth. The seat of lead u, at the base of the cylinder, to receive the striker as it recedes to the back part of the cylinder, and, by its non-elastic nature, prevent a reaction of the striker in the cylinder when the projectile starts in the gun.

Ninth. I claim the fulminate in the front end of the striker, in combination with the cylinder, the tube w, the chamber g, and the spaces 4 4 4 4, Fig. 8, so as to carry the fulminate in the gun and cause it to explode the shell with certainty and ease on penetration, as described.

Tenth. The combination of the firing vents v v, in the rear of the cylinder with the magazine of powder y, in the striker, so that the striker, when it explodes the fulminate in the front of the cylinder, shall discharge a body of fire back in the cylinder, and through these firing vents to explode the shell after a sufficient time has elapsed to allow it to penetrate.

Eleventh. I claim the wooden cylinder seat s, in combination with the cylinder and striker, to steady the cylinder and receive the striker when starting in the gun; and also, I claim the auxiliary magazine of powder t, in the cylinder seat, in combination with the striker, to facilitate the firing of the contents of the shell through the vents v v.

Twelfth. I claim the point of metal e, in front, in combination with the cutting edges b, the radiating faces c, the curved faces d, and the sectional surfaces a, so as to rotate and present the point foremost against an object, first puncture it at the centre, and then cut and part it with the cutting edges and surfaces to enable the projectile the more readily to penetrate an iron vessel.

Thirteenth. I claim the combination of the lead filling n, with the copper band m, to prevent the leading of the gun when closing the windage, as described.

Fourteenth. I claim the combination of the two opposite lead screws 2 2, with the cylinder and the striker forward of the centre of gravity of the striker, so as to secure and release and allow the striker to operate without impinging on the cylinder as it is released, and without obstruction from the severed lead as it plunges forward, as described.

Fifteenth. I claim the peculiar construction of the projectile consisting of the combination of the point *e*, the cutting edges *b*, the radial faces *c*, the curved faces *d*, the sectional faces *a*, the cylindrical body *f*, the recess *i*, the rotating vents *j*, and the flat rear *h*¹, forming one projectile capable of rotating in a smooth bored gun, and acquiring initial velocity with diminished shake, of increasing its rotation in its flight, and of increased penetrative power.

No. 26,905.—DANFORTH JOHNSON, of Chicago, Ill.—*Improvement in Springs for Railway Cars, &c.*—Patent dated January 24, 1860.—This invention consists in producing or constructing a spring which is generally endless or circular in form, and which is composed or made up of one or more leaves, arranged or laid upon each other, and to which power or pressure is applied from within to elongate it.

The inventor says: I *claim* the spring A, composed or made up of one or more leaves, arranged or laid upon each other as described, when the power of pressure from within such circle is applied to elongate it, substantially as and for the purposes set forth.

I also claim, in combination with such spring, the use and application of the head blocks or parts B C, or their equivalents, to elongate such spring, as and for the purposes set forth.

No. 26,906.—A. F. JOHNSON, of Boston, Mass., assignor to ALFRED B. ELY, of Newton, Mass.—*Improved Stitch.*—Patent dated January 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The stitch described, consisting of a chain stitch, having a binding thread passed through its loops, for the purpose described.

No. 26,907.—CHARLES L. KELLING, of Mechanicsburg, Pa.—*Improvement in Preserve Can Covers.*—Patent dated January 24, 1860.—This invention consists of a flanged annular plate, which is constructed with ratchet teeth, lugs, one or more raised beads, and one or more circular grooves or recesses between its inner and outer circumferences, in combination with a disk, which has a series of inclined planes, a groove, and one or more beads, and a spring pawl.

Claim.—A flanged annular plate A, which is constructed with ratchet teeth C, lugs *a a*, one or more raised beads D G, and one or more circular grooves or recesses E H, between its inner and outer circumferences, in combination with a disk I, which has a series of inclined planes *ff*, a groove *e*, and one or more beads *b d* and *a*, spring pawl J, or its equivalent, substantially as and for the purposes set forth.

No. 26,908.—JULIUS KING, of Hoboken, N. J.—*Improvement in Valve Gear for Steam Engines.*—Patent dated January 24, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the combination, with the movable toes H I attached, as set forth, to the valve rockshaft and sleeve, of two eccentrics B C, arranged at right angles to each other, or thereabouts, on the crank shaft, or its equivalent, and having their rods connected with the rockshaft by means of a movable yoke D, rod E, and arm F, and controlled by a guide block *r* and guide *d*, or their equivalents; the whole operating as described for the purpose specified.

And I also claim combining the eccentric yoke D with the movable toes H I, by means of the arms H² I², links *h i*, nut *e*, screw *f*, rods *l n*, and lever K; the whole applied and operating as set forth, to preserve a proper relation between the eccentric yoke and the toes.

No. 26,909.—JOSEPH KOHNLE, of New York, N. Y.—*Improvement in Pianoforte Action.*—Patent dated January 24, 1860.—This invention consists in effecting the repeat of any of the usual actions by securing to the jack an additional upright containing a pivoted button and a spring in such a manner that the hammer but, when elevated, should be mainly supported by the said spring, and thereby cause an instantaneous transmission of every vibration of the keys to the hammer; also, in regulating the catching of the hammer but on the pivoted button, by forming the second knuckle of the hammer but with adjustable screw nuts.

The inventor says: I *claim*, first, the additional upright C, containing the pivoted button B, and the spring D, attached to the jack of any of the usual actions, in the manner and for the purpose substantially as described.

Second. The construction of the second knuckle F of the hammer but, consisting of separate and adjustable nuts and screws, substantially as represented in Figs. 2, 3, 4, and 5, for the purpose set forth.

No. 26,910.—JOHN K. LEEDY, of Woodstock, Va.—*Improvement in Lamps*.—Patent dated January 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the alcohol lamp B, the oil lamp D, and the water cup E, said cup being provided with one and the lamp D with two independent tubes which pass through them; the cup being situated above the lamp D, and connected with it by means of a steam pipe *d*, which passes into the tube *g*; the whole being used substantially as and for the purpose specified.

No. 26,911.—ROBERT H. LONG, of Philadelphia, Pa.—*Improved Arrangement of Steam Engines for Propelling Street Passenger Cars*.—Patent dated January 24, 1860.—This invention consists in placing a small engine and boiler upon the front platform of a passenger railway car, and in so constructing the engine as to bring the shaft on a horizontal line parallel with the car axle.

The inventor says: I *claim*, first, placing a steam engine and boiler, constructed and arranged as described, on the platform of a city passenger railroad car, in a manner substantially as specified.

Second. Placing the pinion F upon the frame of the engine, thus permitting the engine to be brought close to its work, and the whole to be used in combination with the city passenger railroad car for the purposes set forth.

No. 26,912.—WILLIAM LOYD, of New York, N. Y.—*Improvement in Stereoscopic Instruments*.—Patent dated January 24, 1860.—This invention consists in the use of a belt of linen or other suitable fabric for the reception of the pictures, and in the adaptation of such a belt and of the prism, on which it is supported and revolves, to the exhibition of transparent as well as of opaque pictures.

The inventor says: I *claim*, first, the use in an instrument for the exhibition of stereoscopic pictures, of a belt formed as described, of leather, linen, or any suitable woven, felted, or laid fabric.

Second. Making the prism of a stereoscopic instrument of glass or other transparent material, substantially as and for the purpose described.

No. 26,913.—IRA LEONARD, of Lowell, Mass.—*Improved Table Mat*.—Patent dated January 24, 1860.—The inventor says: I construct my mat by taking a plain sheet of metal, and first cut it to any desired form, and then pass it through a machine that will bend it back and forth or crimp it in regular corrugations, so that when it is laid upon the table each corrugation shall touch it only by a single line through its length.

Claim.—A corrugated table mat, for the purpose and substantially as described.

No. 26,914.—ROBERT O. MELDRUM, of Griffin's Mills, and AMOS B. PAXSON, of East Hamburg, N. Y.—*Improved Clothes Wringer*.—Patent dated January 24, 1860.—The operation is as follows: Motion being given to the endless apron and rollers, as described, the clothes are taken piece by piece from the tub, and spread upon the apron, which carries them to the rollers D H, in passing between which the water will be pressed out of the clothes.

Claim.—The arrangement of the elastic pressure roller D, spring F, roller H, the side pieces J J, rollers I I, and endless belt or apron L, for the purposes of a clothes dryer, substantially as set forth.

No. 26,915.—SAMUEL G. MARTIN, of South Amboy, N. J.—*Improvement in Reefing Fore-and-Aft Sails*.—Patent dated January 24, 1860.—The object of this invention is the reefing of fore-and-aft sails with great rapidity, and the perfect securing of the reefs, the reefing being performed at the same time that the sail is lowered, and not following the lowering as is now generally practiced.

Claim.—Reefing the sails of fore-and-aft rigged vessels by the arrangement of reefing lines and other operative means named, substantially as set forth.

No. 26,916.—GEORGE N. MUNGER and GEORGE MUNGER, of New Haven, Conn.—*Improvement in School Slates*.—Patent dated January 24, 1860.—This invention consists in applying to the ordinary wooden school slate, or to slates without frames, a piece or pieces of India rubber, cord or cork, so that said material will project from the surface of the slate or frame in such a manner that when the slate is placed on any plane surface the India rubber will rest upon this surface instead of the frame or face of the slate.

Claim.—Protecting the surfaces of slates by the use of India rubber, cord, or other suitable material applied to the frame, or to the edge of a frameless slate, substantially in the manner described.

No. 26,917.—WILLIAM McCORD, of Sing Sing, N. Y.—*Improvement in Hay Presses*.—Patent dated January 24, 1860.—This invention consists in arranging in the front part or head of the press box, in connection with an ordinary follower, a hinged gate or packer, and operating the same by means of levers, so as to pack the hay or cotton in the box and against the follower as the filling proceeds, the follower being alternately fixed and moved back by hand during this operation.

Claim.—The packing head G hinged to the press box, and operated by lever K, in combination with follower D, when the same are all arranged so as to operate substantially in the manner, for the purposes and upon the principles set forth.

No. 26,918.—SAMUEL RUFUS MASON, of Philadelphia, Pa.—*Improvement in the Ventilation of Bulk Windows*.—Patent dated January 24, 1860.—This invention consists in providing the windows with an inner sash or door to separate therefrom the interior of the store or room, and to make such opening at the bottom and the top of said window as will allow a current of air from the outside to pass up against the window, which will prevent the formation of moisture, frost, &c., on the inside of the window.

Claim.—The combination of the inlets E H², outlets F, and interior sash or door M, with store bulks or other windows, substantially in the manner and for the purposes as described.

No. 26,919.—WILLIAM HOPKINS MORRIS and CHARLES LISTON BROWN, of New York, N. Y.—*Improvement in Repeating Fire-Arms*.—Patent dated January 24, 1860.—The claim and engravings will explain the nature of this invention.

The inventors say: We *claim*, first, the arrangement and combination of the chambers c, whether movable or fixed, the plate F, and bolt H, substantially as and for the purpose shown and described.

Second. The arrangement and combination of the revolving pin I, bolt H, hammer G, and plate F, substantially as and for the purpose shown and described.

Third. The employment, in combination with a barrel A, of a cone-shaped piece B, having several passages a a starting from the base of said cone, and converging so as to discharge into the barrel A, substantially as and for the purpose shown and described.

Fourth. The combination, with the cone-shaped piece B, of a cylinder C, having chambers c c, substantially as and for the purpose shown and described.

No. 26,920.—RICHARD B. PULLAN, of Cincinnati, Ohio.—*Improvement in Furnaces*.—Patent dated January 24, 1860.—This invention relates to a series of furnaces, arranged in such manner that the smoke and gases from the first furnace may pass over the burning coke of the other furnaces and be perfectly consumed.

The inventor says: I *claim* the mutual arrangement of the furnace E with the coke furnaces F and P, each operated in the manner and for the purpose set forth.

I also claim a rotary fire bed, constructed and arranged in such manner that coals resting thereon, after having been charred in a front or first furnace, may be transferred to a second furnace by the rotary motion of the fire bed, substantially as and for the purposes set forth.

No. 26,921.—JOHN L. POTT, of Pottsville, Pa.—*Improvement in Hoisting Apparatus*.—Patent dated January 24, 1860.—The nature of this invention is explained by the claim and engravings.

Claim.—The sliding frame H, with its pulleys J and J¹ combined with the drum G, and so actuated by the screw shaft F, or its equivalent, as to control the position of the folds of the rope round the drum, in the manner and for the purpose specified.

No. 26,922.—BENNETT POTTER, JR., of Hubbardston, Mass.—*Improvement in Gun Powder Mills*.—Patent dated January 24, 1860.—The shaft G is connected by means of the gearing I K L M, with the driving shaft E, and is so revolved as to lift the material which is exposed to the action of its blades, and raise it from the bottom to the top of the hopper A, and as the hopper at the same time revolves, the blades H of the stirrer are brought constantly to bear upon fresh portions of the material, no part of which is suffered to remain undisturbed.

Claim.—The inclined revolving stirrer, in combination with the revolving hopper, operating in the manner substantially as set forth.

No. 26,923.—EBENEZER G. POMEROY, of New York, N. Y., assignor to J. B. and W. W. CORNELL & Co., of said New York.—*Improvement in Smelting and Refining Iron*.—Patent dated January 24, 1860.—The claim explains the nature of this invention.

Claim.—The use of the ores of zinc, or the pure metal itself, in iron furnaces, at the same time that jets of steam or water are discharged into said furnaces, substantially in the manner and for the purposes set forth.

No. 26,924.—ADOLPH RODA, of Rochester, N. Y.—*Improved Bedstead Fastening*.—Patent dated January 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The wrench lever A, with flat reverse and inclined obverse surfaces, turning on a centre in the mortise of the post, in combination with the hooked bar or bolt B, when immovably attached to the rail, and arranged to draw at right angles with the plane of the motion of said wrench, substantially in the manner and for the purposes set forth.

No. 26,925.—WILLIAM RICE, of Philadelphia, Pa.—*Improved Curtain Fixture*.—Patent dated January 24, 1860.—This invention consists in the arrangement of a pulley *f* on the blind roller, two other pulleys *i i*, and an endless band, the pulleys being covered with yielding material, and turning in fixed centres, so as to retain the blind in any position to which it has been raised or lowered.

Claim.—The arrangement of the pulley *f* on the blind roller, the pulley *i i*, and the endless cord G, when the whole of the pulleys turn on fixed centres, and when they are covered with gum elastic or other yielding material, as and for the purpose set forth.

No. 26,926.—ANDREW J. RITTER, of Rahway, N. J.—*Improvement in Attaching Thills to Vehicles*.—Patent dated January 24, 1860.—The nature of this invention is explained by the claim and engravings.

Claim.—The combination of the clevis C and the thumb screw D with the shaft eye K and the half journal box H, (which is secured to the axle of the vehicle,) the parts K and H being so constructed that when the clevis C, which is secured to the shaft eye by the bolt and nut E F, is in the position shown in Figs. 1 and 2, the parts K and H will be coupled together; but when the thumb screw D is loosened, and the bottom of the clevis C is pulled forward and upward toward B, the parts K and H will be uncoupled.

No. 26,927.—WILLIAM RICE, of Philadelphia, Pa.—*Improved Steam Generator*.—Patent dated January 24, 1860.—This invention consists of a box covered above and below with perforated or wire gauze plates *f h*, and containing an annular double cone-shaped gas chamber, with an annular perforated gas pipe K and a central double cone-shaped gas chamber L, the whole arranged and combined with the inner and outer casing C A and the vents *x x*, so as to form an apparatus by means of which gas may be economically applied to the generation of steam.

Claim.—The box G, its perforated wire gauze plates *f* and *h*, the annular double cone-shaped gas chamber H, its annular perforated gas tube K, and the double cone-shaped chamber L, when the whole is combined with and arranged in respect to the inner casing C and outer casing A, and vents *x x* of the generator, as and for the purpose set forth.

No. 26,928.—H. H. RICHARDSON, of Barre, Vt.—*Improvement in Water Wheels*.—Patent dated January 24, 1860.—The nature of this invention will be understood by reference to the claim and engravings.

The inventor says: I *claim* graduating the respective streams of water and projecting the same upon the buckets from chutes, of substantially the within described shape, when the said chutes are so combined with the pivoted gates *h k* as to obtain the maximum of effect, substantially as described and for the purposes set forth.

In combination with the above mentioned form of chutes and gates, I also claim constructing the bucket wheel with the branching arms and disk-shaped floats, substantially in the manner and for the purpose set forth.

No. 26,929.—JOHN ROUX, of New York, N. Y.—*Improvement in the Manufacture of Siccativ Oils*.—Patent dated January 24, 1860.

The inventor says: I take one ounce of nut galls, or eight ounces of powdered oak bark and boil it two hours in four pounds of water. I then filter the solution so made and, adding one gallon of fish or whale oil, boil the whole for one hour. After the compound has cooled I separate the oil from the water, and the solid matter formed during the boiling, and put into the oil a solution of sulphate of copper.

Claim.—The mode or method or chemical process by means of which I can give the common fish or whale oil the drying and other qualities now only found in vegetable oils, and which have heretofore rendered them preferable and of superior value for painting and other similar uses.

No. 26,930.—MAHLON REEDER, of Philadelphia, Pa.—*Improved Apparatus for Preserving and Discharging Malt Liquors*.—Patent dated January 24, 1860.—This invention consists in the application, for preserving and discharging malt liquors, of a vessel A, furnished with suitable cocks M N and a tightly packed piston D, so operating that the malt liquor may be retained within the vessel free from contact with the air at all times, and so that it may be discharged from the vessel in small quantities.

Claim.—The application, for preserving and discharging malt liquors, of a vessel furnished with a suitable cock or cocks, and a tightly packed piston, operated substantially as described for the purpose specified.

No. 26,931.—GEORGE W. ROBERTSON, of Philadelphia, Pa.—*Improvement in Hydrants.*—Patent dated January 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Dividing the space between the casing of the hydrant and the water pipes into two chambers by means of the partition *h*, the upper chamber terminating in a plate *g*, and filled with a non-conducting material, and the capacity of said chamber being increased by means of the large bore *f* and space *f*¹, while the lower chamber, formed between the partition *h* and the bottom board *k*, contains no non-conducting material, but is fitted with an adjustable face board *a*¹, the whole being constructed in the manner and for the purposes set forth.

No. 26,932.—RICHARD A. STRATTON, of Philadelphia, Pa.—*Improvement in Machines for Polishing Leather.*—Patent dated January 24, 1860.—The nature of this invention is explained by the claim and engravings.

Claim.—Attaching the agate to a vibrating arm *J*, which is so controlled by an eccentric *K*, or its equivalent, operated by and moving simultaneously with the shaft which imparts the vibrating motion to the arm, that the agate is depressed to the curved bed of the machine during the inward movement of the arm, and raised from the bed during its outward movement, as specified.

No. 26,933.—J. HERBERT SHEDD and WILLIAM EDSON, of Boston, Mass.—*Improvement in Railroad Switches.*—Patent dated January 24, 1860.—The nature of this invention will be understood by the claim and engravings.

Claim.—The arrangement or device of deflecting one track from its true line, and putting permanently in the true line of that track the beginning of another line of track, substantially as described and shown by the drawing *A*, for the purpose of taking advantage of the tangential or right line of motion of a car or engine for conducting the car or engine from one track to the other.

No. 26,934.—FRANCIS B. SCOTT, of Buffalo, N. Y.—*Improvement in Ditching Machines.*—Patent dated January 24, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the shields *B* at the side of the excavator wheel, as described.

Second. Attaching the clearers, which pass through the spades, to an endless chain.

Third. The clearers, which clear themselves by being raised up through a slot or before a scraper by rollers or slides attached to the clearers, which run on an inclined plane or in a cam, substantially as specified.

Fourth. Making the frame in two parts, with hinge joints and centre shaft on line with hinge joints and the curved rack, for the purpose specified.

Fifth. The combination of the toothed rack *T T* with the excavator, for the purpose of a gauge on the surface to determine the line of descent of the bottom of the trench, substantially as described.

Sixth. The combination of the V-shaped scraper *x* with the excavating wheel *A*, substantially as specified.

No. 26,935.—JONATHAN SMITH, of Dorchester, Mass.—*Improvement in Attaching Bonnets to Sails.*—Patent dated January 24, 1860.—In attaching the bonnet to the jib the knob is turned sufficiently to introduce the knob through the oval hole *A*, when it returns to a position across the hole of the oval grummet, thereby preventing it from coming out.

Claim.—The oval form of the grummet and the form of the knob attachment, and method of using them, as adapted to jibs or other sails.

No. 26,936.—LEVI S. TAYLOR, of Lamoille, Illinois.—*Improved Clevis for Attaching Whiffletrees to Vehicles.*—Patent dated January 24, 1860.—This invention consists of the clevis *J*, for attaching the whiffletree to vehicles, constructed with a cam catch *H*, so that the pin *I*, after being placed therein and simply turned, the lower end, by its *T* shape, entering a transverse oblong slot *K* in the lower part of the clevis, the upper end will come between the cam *O* and catch on the upper part, which, by the spring of the clevis itself, will effectually hold the pin to the clevis.

Claim.—The clevis, or its equivalent device, constructed substantially in the manner described and for the purposes fully set forth.

No. 26,937.—REUBEN TOWER and GEORGE E. TOWER, of Ashtabula, Ohio.—*Improved Water Gauge*.—Patent dated January 24, 1860.—The water in the vessel C being always on a level with that in the boiler, causes the vessel to fall and rise by the increase and diminution of its quantity, as the water rises and falls in the boiler, and thus to operate the index *f*, and show the quantity of water in the boiler.

Claim.—The gauge composed of a vessel C, suspended on springs and connected with a boiler by flexible pipes D E, and with an index by a rack and pinion, or their equivalent, and operating substantially as described, to show the condition of the water level in the boiler.

No. 26,938.—JASPER VAN WORMER, of Albany, N. Y.—*Improvement in Stoves*.—Patent dated January 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The construction of an air chamber whose perforated air-delivering surfaces or edges *f z f* shall be formed into recesses, with salient points projecting towards the centre of the throat of the fire chamber, for the purpose of obtaining the largest space for the passages of gases from the fuel, in combination with the proper supply of air, to secure the most perfect combustion of the unconsumed gases and fuliginous matter, substantially as set forth in the above specification.

No. 26,939.—LEONARD J. WORDEN, of Utica, N. Y.—*Improved Fastening for Shoe Laces*.—Patent dated January 24, 1860; antedated January 3, 1860.—This invention consists in providing a metallic slide or fastening, so constructed that shoe laces are secured at the top of the shoe.

Claim.—Securing shoe laces, in the manner set forth, by the use of the metallic fastener A, when constructed and applied in the manner and for the purpose substantially as set forth.

No. 26,940.—CALVIN D. WHEELER, of New York, N. Y.—*Improved Belt Punch*.—Patent dated January 24, 1860.—This invention consists in combining and arranging with a common punch an adjustable point C and scale D, to enable a person to adjust easily the punch to cut the holes equi-distant for any sized belt or other material to be perforated.

Claim.—The sliding rule provided with a measuring point, as described, in combination with a punch, substantially as set forth.

No. 26,941.—JOHN A. WADSWORTH, of Providence, R. I.—*Improvement in Elastic Pessaries*.—Patent dated January 24, 1860.—The cup A is made of some very soft and elastic substance, and is formed like an inverted bell. At its margin it is about one sixteenth part of an inch thick, and is gradually increased in thickness from the margin toward the bottom of it, where it is about one tenth of an inch thick. In the centre of its bottom is an aperture.

The inventor says: I *claim* the peculiar form and peculiar size, combined with great softness and elasticity of the cup.

I also claim the method by which the cup is kept in position, substantially as above specified.

No. 26,942.—THEODORE T. WOODRUFF, of Philadelphia, Pa.—*Improvement in Seats and Couches for Railroad Cars*.—Patent dated January 24, 1860.—This invention is explained by the claim and engravings.

The inventor says: I *claim* the combination of the two sets of seat and back frames, arranged and combined with the car by supporting ways, substantially as described, so that when the said two sets of seat and back frames are opened out they shall constitute a couch suitable for two persons, as set forth.

And I also claim the combination of the two opposite frames, each connected with the car by means of hinged bars on which they slide, substantially as described, to form together an elevated couch, as set forth.

No. 26,943.—JOSEPH YORBROUGH, of Milton, N. C.—*Improvement in Dressing Millstones*.—Patent dated January 24, 1860.—The grooves *e e¹ g* in this invention are so arranged that they can be made of considerable depth, and that they allow the grain to spread over the whole surface of the stones, and at the same time they are brought in such relation to one another that no kernel is allowed to escape before it has been completely reduced.

Claim.—The arrangement of the main grooves A, with radial branches *c* and tangential branches *d*, in combination with the large grooves *f* and *h*, and with the small grooves *e*, *e¹*, and *g*, to operate substantially in the manner and for the purpose specified.

No. 26,944.—ISAAC EDELMAN, of Philadelphia, Pa., assignor to G. W. EDELMAN, of said Philadelphia.—*Improved Water Closet*.—Patent dated January 24, 1860.—This invention consists in the arrangement of the notched pipe and plate arranged within the basin for discharging the water into the latter in a thin stream, which has a thoroughly cleansing effect.

The inventor says: I *claim* the arrangement of the three-way cock I, having its plug central with the hinge of the lid J, the vessel N, and pipes K, L, and M.

Second. The tube P, with its notched end, in combination with the plate Q, arranged within the basin, as set forth, for the purpose specified.

No. 26,945.—GEORGE K. FARRINGTON, of Xenia, Ohio, assignor to himself and GEORGE H. READ, of said Xenia.—*Improvement in Coffee Pots*.—Patent dated January 24, 1860.—The nature of this invention will be understood by the claim and engravings.

Claim.—The arrangement of the apertures *d d* in the sides of the condenser B, at a uniform height and in such relation to the bottom of the inverted cup D, as to keep the condensing water at a constant height, and low enough to allow the steam to escape at a pressure ordinarily obtained in the coffee pot, in combination with the vent apertures *m p*, or their equivalents, substantially as and for the purpose specified.

No. 26,946.—HENRY W. HENLEY, of New York, N. Y., assignor to ALBERT PALMER, of Jersey City, N. J.—*Improved Ventilating Bedstead*.—Patent dated January 24, 1860.—This invention consists in attaching to an ordinary bedstead one or more fans D D, which, being used in conjunction with a mattress formed of a series of serrated sections B, driven or propelled by means of clock work C, shall operate in such a manner that a current of air shall constantly be driven up through the serrated mattress.

Claim.—Combining one or more fan or fans with the mattress formed of the serrated sections or its equivalent device, when the same shall be arranged and operated in the manner described and for the purpose specified.

No. 26,947.—ANDREW HUNTER, of Hereford, Va., assignor to himself and PETER HUNTER, of Adams County, Ohio.—*Improved Rat Trap*.—Patent dated January 24, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the arrangement of the bell crank G in connection with the drop gate D and platform F, substantially as and for the purpose set forth.

Second. I claim the combination of the mechanism by means of which the animal is made to reset the trap, consisting essentially of the tilting platform K, escapement M, escapement wheel and axle N, cord Q, and weight P, substantially as described.

No. 26,948.—A. F. JOHNSON, of Boston, Mass., assignor to ALFRED B. ELY, of Newton, Mass.—*Improvement in Sewing Machines*.—Patent dated January 24, 1860.—The nature of this invention will be understood by the claim and engravings.

The inventor says: I *claim* the rotary hook *v*, constructed as described or in any manner equivalent thereto, in combination with a needle and bobbin, for the purpose of forming a seam by the interlacing of two threads, as set forth.

Second. I claim the shoulder *t*, or its equivalent, for the purpose of preventing the point *i* from being entangled with the old loop, as set forth.

Third. I claim passing that portion of the loop that lies in the groove *n*, or around the periphery of the hook during the first portion of its revolution, behind the bobbin, as set forth.

No. 26,949.—WILLIAM LEWIS, of Brooklyn, N. Y., assignor to M. J. DRUMMOND, of New York City.—*Improved Method of Attaching Scabbards to Belts*.—Patent dated January 24, 1860. This invention consists of a plate or escutcheon *a*, attached to the waist belt or sash, and provided with an opening that passes a button *c* on the sword case, and then retains the shank thereof by a spring latch *e*, in such a manner that the sword will hang freely, but is firmly fastened to the sash.

Claim.—The escutcheon *a*, receiving the button *c*, on the sword case, when combined with the spring latch, or its equivalent, passing over the shank of the button, as and for the purposes specified.

No. 26,950.—ALLEN LAPHAM, of Brooklyn, N. Y., assignor to himself and C. A. DURGIN, of New York City.—*Improved Steam Trap*.—Patent dated January 24, 1860.—The nature of this invention is explained by the claim and engravings.

The inventor says: I *claim*, first, arranging and combining with a float, operating as described, the channels for the introduction of steam, whereby I am enabled to equalize the pressure upon the float, substantially as set forth and specified.

Second. I claim combining with a vertical rod a float which moves upon said rod and operates the valves by mechanism, substantially as set forth and specified.

Third. I claim combining with a float, operating as described, a double or compound valve, substantially as set forth and for the purposes specified.

Fourth. I claim combining with a float, having a movement independent of the valve rod,

the mechanism described, or its equivalent, for operating the valves, substantially as set forth and specified.

No. 26,951.—JOHN E. NEILL, of the United States Navy, assignor to C. S. POMEROY, of New York City.—*Improved Wrench*.—Patent dated January 24, 1860.—B is the movable jaw with its slot enlarged to admit of motion towards the stationary jaw and bar, but permitting no lateral movement; C is a collar sliding upon the bar bearing upon the upper surface of the nut D, and confined in contact therewith by a tongue or lug F entering a groove cut in the circumference of the nut.

Claim.—The use of the jaw B in connection with the collar C and nut D, when said jaw is constructed and operated in the manner specified.

No. 26,952.—GEORGE NEILSON, of Boston, Mass., assignor to HOLMES, BOOTH & HAYDEN, of Waterbury, Conn.—*Improvement in Lamps*.—Patent dated January 24, 1860.—The nature of this invention is explained by the claim and engravings.

The inventor says: I *claim* an improved lamp cone or deflector D, as made with its lip or flanch *a*, corrugated or formed with ridges to support the chimney and not only form air passages underneath its lower edge, but to direct and insulate the several currents under the chimney, as stated.

And in a cone or deflector so made, I claim constructing each chimney supporting corrugation concave on its under side and with a closed outer end, as specified.

No. 26,953.—GEORGE K. PROCTOR, of Beverly, Mass., assignor to himself and G. H. STICKNEY, of said Beverly.—*Improved Lamp Lighting Device*.—Patent dated January 24, 1860. This invention consists in applying to a lamp a match holder and friction plate, the latter having a spring connected to it and so arranged that when liberated and actuated by the spring the friction plate will ignite the match and thereby cause the lamp to be lighted.

The inventor says: I *claim* the partially rotating and yielding plate E operated by the spring D, or its equivalent, and attached to the shaft C in connection with the hook *j* also attached to shaft C, the catch *n* on lever G, and the match holder *c*, the latter being arranged relatively with the wick tube *d* of the lamp, substantially as and for the purpose set forth.

I also claim the extinguisher H attached to the rod I, in connection with the crank *k* on the rod F, arranged, substantially as shown, to insure the exposure of the wick simultaneously with the ignition of the match *g*.

No. 26,954.—JAMES W. PECK, JR., of Brooklyn, N. Y., assignor to himself and L. B. HAUXHURST, of said Brooklyn.—*Improved Helical Spring*.—Patent dated January 24, 1860. This invention consists in crimping or corrugating the steel wire previous to forming it into a coiled or helical spring, and in conjunction with this crimping it consists in giving to the wire at each bend a half twist, which will give resilient action to the wire when formed into a coil.

Claim.—The corrugated or zigzag wire spring herein described as a new article of manufacture.

No. 26,955.—JOSEPH SMITH, of Cincinnati, Ohio, assignor to himself and ROBERT R. LYND, of said Cincinnati.—*Improvement in Shears*.—Patent dated January 24, 1860.—The action is first to close quickly the heel or inner end of the blade D down upon the work, after which the blade D acts upon the blade A with a nearly uniform draw cut from the heel to the front.

The inventor says: I *claim* the oblique guide slots *e*, guide pin E, and wrist F, constructed, combined, and operating in connection with the blade D and handle *d*, substantially as and for the purposes set forth.

Second. The construction and combination of the dovetailed back *a*, stub J, and movable bit H, of the blade adapted in the manner set forth, to preserve the original length and breadth of the blade and the position of its cutting edge.

No. 26,956.—JOSEPH STEGER, of Mattewan, N. Y., assignor to JAMES M. FREAR, of Peekskill, N. Y.—*Improved Device for Attaching Spirit Levels to Squares*.—Patent dated January 24, 1860.—The inventor says: This invention consists in providing the lower part of the level with a groove and spring A and the insertion of mercury, spirits, or water, in such a manner that I am enabled to level from above by reversing the level.

Claim.—A level constructed as set forth, so as to be adjusted to an ordinary square in the manner shown.

No. 26,957.—JOSHUA TURNER, of Cambridgeport, Mass., assignor to himself, J. T. BARTLETT, and E. E. BUTMAN, of Boston, Mass.—*Improved Glue Pot*.—Patent dated January 24, 1860.—The steam from the water vessel is made to pass into the cover or cap D, and operates

not only to heat the contents of the vessel A, but to supply the same with condensed water sufficient to compensate for the water lost by evaporation in such vessel while the cover may be off the two vessels A and B.

The inventor says: I *claim* the improved article of manufacture, or glue pot, constructed not only with one or more steam escape passages *a* leading out of the space between the glue holder A and the water vessel C, but with a steam retainer and condenser D applied to cover both vessels A and B, and operate therewith, substantially as specified.

And in conjunction therewith, or with a glue pot made with the vessels A B and cover or condenser D, arranged and connected by one or more passages *a*, as described, I claim the sponge receiver or water and sponge heater E arranged therewith, substantially as specified.

No. 26,958.—SYLVENUS WALKER, of Boston, Mass., assignor to WILLIAM P. SPENCE, of said Boston.—*Improved Egg Beater*.—Patent dated January 24, 1860.—The beaters are plunged vertically into a suitable vessel containing the necessary quantity of eggs, the handle C is grasped and held firmly in the left hand, while the handle C¹ is held rather loosely in the right hand and vibrated back and forth, by which movement the beaters are rotated, but in opposite directions.

Claim.—The arrangement and combination of the oblique rack and pinions operating in the manner and for the purpose substantially as set forth.

No. 26,959.—ZACHARIAH WALSH, of Newark, N. J., assignor to C. WALSH, of said Newark.—*Improvement in Locks for Carpet Bags*.—Patent dated January 24, 1860.—This invention consists in combining one or two catches or bolts D E with a slide C, whereby the bag may not only be locked at or near each side consecutively, but also enabling both catches or locks to be unlocked simultaneously with a single operation of the key.

Claim.—The combination of the slide C with one or more spring catches D E placed within a suitable case A, and arranged to operate with the shackles *ff*, substantially as and for the purpose set forth.

No. 26,960.—NORMAN WIARD, of Janesville, Wis., assignor to DANIEL J. TOWNSEND, of New York City, as his trustee.—*Improvement in Locomotive Vehicles for Running on Ice or in Water*.—Patent dated January 24, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination of the following elements, viz: a watertight boat B capable of floating on runners or skates C C D D to run on ice and sustain the boat thereon, and so connected with the boat as to turn for steering, substantially as described, and a single traction or propelling wheel placed centrally between the runners or skates to act on the ice, for the purpose of propelling the boat when its runners or skates rest on the ice, substantially as described. I am aware that the traction wheels fast on one and the same driving axle have been combined with runners and a boat; but in such case the runners were not swivelled to the boat to change the direction of the line of travel, and the two wheels being fast on the same axle would resist any means employed for steering; and hence I do not wish to be understood as claiming, broadly, the combination of traction wheels with runners or skates and a boat, but to limit my claim to the combination above stated.

Second. I also claim combining the traction or propulsion wheel E and the boat by interposed springs, or equivalents thereof, that the wheel may be self-adapting to any inequality of surface, while the runners rest on the surface of the ice, as set forth.

Third. I also claim, in combination with the boat and runners, or skates, the mechanism substantially as described, for lifting the runners from the ice, by lifters F which sustain the weight, substantially as described, whereby the runners can be prevented from becoming fastened by frost to the surface of the ice, when at rest, as set forth.

Fourth. I also claim the stationary runners attached to the bottom of the boat, in combination with the movable runners or skates at the sides, substantially as and for the purpose set forth.

Fifth. I also claim constructing the traction wheel, substantially as described, that is, with its periphery a sharp cutting edge, to penetrate into the ice, to prevent the boat from moving sideways, and thereby admit of using runners smooth or rounded, when such periphery is combined with lateral projecting wings having cutting edges to penetrate into the ice and take hold therein from traction, substantially as described.

Sixth. So connecting each of the movable runners or skates with the boat that each may turn in a horizontal plane on an axis I, substantially as and for the purpose described.

Seventh. I also claim combining with the turning runners or skates and with the steering chains L M the tension or adjusting blocks, or equivalents, substantially as and for the purpose specified.

Eighth. And I also claim connecting the ice-penetrating brake by a hinged rod or arm Q to the boat, substantially as described, in combination with the connection of it by the toggle-joint lever *r*, or the equivalent thereof, with a steam piston, substantially as and for the purpose specified.

No. 26,961.—HENRY S. SCHELL, of Philadelphia, Pa.—*Improvement in Creepers to Prevent Slipping on Ice*.—Patent dated January 24, 1860.—This invention is explained by the claim and engravings.

The inventor says: I *claim*, first, the pin D, or any other contrivance essentially the same, by which the side pieces B and C are prevented from revolving backwards.

Second. The adaptation of the pole and pin E, or screw H, to the plate A, or any arrangement substantially the same, by which the creeper is secured.

Third. The mode of attaching the creeper to the heel, viz: by pushing the points of the plates B and C as far forward as possible, and then forcing the bent end of it over the front of the heel, substantially as before stated.

No. 26,962.—HENRY B. ADAMS, of New York, N. Y.—*Improvement in Fan Blowers*.—Patent dated January 31, 1860.—The gradual recession of the interior surfaces of the casing *e* from the centres of rotation, enables the fan wheels *b* to crowd in and impart a large volume of air.

Claim.—The casing *e* of the described configuration, when in combination with double working plane surface blades *c c*, as described.

No. 26,963.—JOHN A. BASSETT, of Salem, Mass.—*Improvement in Apparatus for Decomposing Steam*.—Patent dated January 31, 1860.—This invention consists of a special form of apparatus for decomposing steam, so as to obtain hydrogen abundantly from it.

Claim.—The employment of a retort furnished with a hollow pipe in the axis of the retort, perforated in the manner set forth, the whole operating in the way and for the purpose described.

No. 26,964.—W. W. BATCHELDER, of New York, N. Y.—*Improved Method of Lighting Gas by Frictional Electricity*.—Patent dated January 31, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* attaching the electrometer to the gas fixture, substantially as and for the purposes set forth, meaning by gas fixture that part of the gas pipe or conductor which is in proximity to the burner, and to which the burner is attached, whether it be a bracket, drop light, chandelier, or stand, or other analogous fixture.

I also claim connecting the electrometer with the stop cock, so that the act of turning the same to "let on" the gas, shall bring the electrometer into action, as set forth.

No. 26,965.—C. F. BAXTER, of Boston, Mass.—*Improvement in Filters*.—Patent dated January 31, 1860.—The engraving presents a vertical section. A is the concave globe of the exterior case, and B the interior sectional diaphragm fitted thereto; *b* is the lever by which the diaphragm is actuated from side to side. The water enters at C, passing through the filtering medium D and out at E; *c* indicates where the globes are united.

Claim.—Operating the movable diaphragm within the globe, substantially as described and for the purpose set forth.

No. 26,966.—W. D. BUNTING, of Cleveland, Ohio.—*Improved Composition for Tanning Skins and Hides*.—Patent dated January 31, 1860.—The following are the proportions used in this composition: Seven gallons of boiling soft water, fifteen pounds of terra japonica, four ounces of dry elder leaves and bark, and six ounces of powdered nutgalls, stirred thoroughly until completely macerated. To this eight gallons of cold water are added. One pound of potato starch is then put in, with an equal quantity of common salt; the whole is stirred together, when it is ready to receive the skins. Four ounces of alum and fourteen ounces of whiting are then added.

Claim.—The composition of terra japonica, nut galls, elder, alum, salt, whiting, and starch, in the proportions stated, in the manner and for the purposes set forth.

No. 26,967.—GEORGE COLHOUN, of Philadelphia, Pa.—*Improvement in Ventilators*.—Patent dated January 31, 1860.—By this invention the air, as the car moves along, is compressed around the outside of the elevated elbow pipe and also within the inner cone, and then suddenly escapes through and outside of the mouth of the elbow pipe in such a manner as to produce a vacuum in the elbow pipe, and a consequent rushing out of the vitiated air which the car contains.

Claim.—The inner and outer receiving cones C D, elbow pipe B, and flaring discharge pipe F, when the whole is constructed, arranged, and combined, substantially as and for the purpose set forth.

No. 26,968.—VOSCO M. CHAFEE, of Xenia, Ohio, assignor to Himself and C. DE WITT SMITH, of Washington, D. C.—*Improved Clamp for Making Clevises*.—Patent dated January

31, 1860.—The nature of this invention will be understood by examining the claim and engraving.

The inventor says: I *claim*, first, the clevis clamp or tongs, composed of the jaws A and A¹, constructed as described, and operating in the manner specified.

Second. I also claim the combination of the jaws A and A¹, with the handles B and B¹, or their equivalents, for operating the jaws, in the manner described.

No. 26,969.—JACOB B. CURRIER and ANDREW J. SIMPSON, of Lowell, Mass.—*Improved Arrangement of Air and Mercurial Thermometers*.—Patent dated January 31, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim* the combination of the sealed thermometer and the barometric thermometer, when both have the same range from temperature for determining the pressure of the atmosphere, substantially as described.

Second. We claim the method of adjusting the two thermometers so that a change in the weight of the atmosphere will be indicated by their variation.

No. 26,970.—LESTER DAY, of Buffalo, N. Y.—*Improved Churn*.—Patent dated January 31, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the breakers E, having shoulders or offsets H and H¹, and permanently connected to the crosspiece F, so as to be removable therewith, and extending from the crosspiece to the bottom of the churn, for the purposes and substantially as described.

Second. The adjustable dash blades D, placed diagonally on the arms C, and arranged to operate with the breakers F, for the purposes and substantially as set forth.

No. 26,971.—B. F. DELANO, of Boston, Mass.—*Improved Attachment of Rudders*.—Patent dated January 31, 1860.—This invention has for its object to prevent the vibration and shaking of the rudder which wears upon the pintles and their bearings, and consists of a device for tightening up the rudder and preventing this play or jarring while it is left free to swing on its pintles as usual.

Claim.—The described device *g h k*, or its substantial equivalent, for tightening up the rudder, operating substantially as described.

No. 26,972.—THOMAS H. DODGE, of Washington, D. C.—*Improvement in Combined Reaping and Mowing Machines*.—Patent dated January 31, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination of the inclined projecting end of the beam D, with the rear end of the main frame A, and draft connection *b*, substantially as set forth.

Second. I claim the combination of the shoe or brace H, with the sheath or tube H¹, and hinged forks or arms I I, substantially as set forth.

Third. I claim extending the journals of one of the forks I, of the sheath or tube H¹, through its hinge, to form the journal of the pulleys 6 and 7, the parts being arranged substantially as set forth.

Fourth. I claim the combination of lever *m*, with its dog *m*¹, with case H¹, and shoe H, substantially as set forth.

Fifth. I claim making the upper part of the raker box, in the form of a hollow frustrum of a cone, and the bottom concave, substantially as shown in Figs. 7, 8, and 9.

Sixth. I claim covering the surface of the reel ribs with India rubber, or its equivalent, substantially as and for the purposes set forth.

No. 26,973.—GEORGE DOYLE, of Ottawa, Ill.—*Improvement in Electric Telegraphs*.—Patent dated January 31, 1860.—The claim and engravings explain the nature of this invention.

Claim.—I claim collecting a current induced by a current passing through a primary conductor in a metal sheathing surrounding but insulated from the primary conductor, and employing such induced current either in connection with the primary current, or alone, to work telegraph instruments, substantially as described.

I also claim combining the action of the primary and induced currents, by means of two electro-magnets, one in each circuit, so applied in combination with a lever carrying both their armatures, that both magnets act in concert to move the said lever, substantially as specified.

I also claim combining the use of hardened steel cores in the electro-magnet of the induced current, with the use of soft iron cores in the electro-magnet of the primary current, substantially as and for the purpose specified.

No. 26,974.—EUGENE DUCHAMP, of St. Martinsville, La.—*Improvement in Furnaces for Evaporating Sugar Juices*.—Patent dated January 31, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The described arrangement of horizontal steam boilers E, in rear of the furnace K, flue spaces formed by walls B B, whereby the flame and smoke is directed from the fur-

nace K, between the walls or partitions A A and B, to the rear of the furnace, and thence under the steam boilers through the furnace D, when it finally escapes through the chimney M, as indicated by the direction of the arrows. This I claim, in combination with the pipes G H and L, arranged under and serving as supports for the evaporating pans, all in the manner and for the purposes described and represented.

No. 26,975.—DANIEL N. DUNZACK, of Salem, Mass.—*Improved Method of Operating Stop Cocks*.—Patent dated January 31, 1860.—When the water is to be let into the small pipe from the main pipe X, the lever B being canted to the right side, and the slide O being at its lower end, one end of the wire is passed through a pulley secured directly over the faucet in the small pipe and fastened to the outer end of the toggle y, which is in the head of A. When the wire is pulled the upper end of the toggle y will be canted towards the wire, when its base, which rests on the bottom of the hollow head A, will lift one end of the slide O.

Claim.—The arrangement and combination of the several parts when arranged and combined as described for the purpose set forth.

No. 26,976.—JOSEPH L. DUTTON, of Cherry Lake, Florida.—*Improvement in Ploughs*.—Patent dated January 31, 1860.—This invention consists in the arrangement of devices forming a plough, which can be altered to cut deep or shallow furrows, and the handles of which can be easily adjusted.

Claim.—The arrangement of the beam A, notched adjusting bar I, handles D, crossbars C, hooked staple H, and wedge F, with the notched heel C, and notched and slotted toe B, the whole of the parts being constructed for joint adjustment as set forth.

No. 26,977.—JACOB EDSON, of Boston, Mass.—*Improvement in Machines for Cutting and Splitting Leather*.—Patent dated January 31, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim, first, the bent knife, so constructed as to cut the leather both to a width and thickness, either in a horizontal or a bevelled line, at the same time, and whereby a cutter of greater strength and stiffness is obtained, as set forth.

Second. I claim the use of the tongue i, operating upon the leather as described and for the purpose specified.

Third. I claim attaching the cutter or cutters to a stock made adjustable, so as to vary, according to the position in which the said stock is set, the width of the strip cut and its bevel or angle, by means substantially as described.

No. 26,978.—MATTHEW EDWARDS, of Cambridge, Mass.—*Process for Coloring the Surface of Metals*.—Patent dated January 31, 1860.—This invention consists in a process of coloring, bronzing, or darkening metals, which is peculiarly applicable, in connection with the well known process of electro-plating, to the production of a black, brown, or other colored ground work to white lines, or marks of silver or other white metal.

Claim.—The new process, substantially as described, for coloring, darkening, or bronzing metals, when the same is applied to metals that have had a previous deposit of white metal upon them.

* No. 26,979.—ANDREW FERBER, of Elizabeth, N. J.—*Improvement in Shutter Fasteners*.—Patent dated January 31, 1860.—The object of this invention is to obtain for window shutters and blinds a fastening by which the shutters may be secured in an open or closed state, and also secured at any intermediate points without depending upon any fixtures connected with the outer side of the building beyond the window sill.

Claim.—The plate D, attached to the shutter or blind C, provided with the hook b, and the socket c, the curved rod E, provided with the eye f, and the sphere or ball e, which is fitted in the socket c, and the pins in the sill B; the whole being arranged substantially and for the purpose set forth.

No. 26,980.—CHANDLER FISHER, of Milton, Mass.—*Improved Curtain Fixture*.—Patent dated January 31, 1860.—The nature of this invention is explained by the claim and engravings.

Claim.—Hanging the spool end of the curtain rod upon the curved spring g, attached directly to the bracket C, as set forth, for the purpose specified.

No. 26,981.—JOHN M. FORREST, of Norfolk, Va.—*Improvement in Carriage Springs*.—Patent dated January 31, 1860.—This invention consists in a mode of forming and connecting the springs of vehicles so as to make them accommodate themselves to the varying weights imposed, retaining their elasticity through a greater range of strain than the springs in common use.

Claim.—A carriage spring, constructed, arranged, and operating substantially in the manner described.

No. 26,982.—DENNIS C. GATELY, of Newtown, Conn.—*Improvement in Manufacturing Rubber Belting.*—Patent dated January 31, 1860.—The claim explains the nature of this invention.

Claim.—The method described of manufacturing belts or bands of India rubber or gutta percha, the same consisting in placing them in contact with smooth plates of metal and then heating them, substantially in the manner and for the purposes specified.

No. 26,983.—A. GEIGER, of Dayton, Ohio.—*Improvement in Burners for Vapor Lamps.*—Patent dated January 31, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Making the cone piece I I, which contains the non-conducting cork, with a break in the metal at the upper end of the cone piece between I I and B² B², this space being occupied by a ring of cork instead of the metal, so that the heat of the burner and cap may not be conducted down the tube I I, substantially as set forth.

No. 26,984.—EDGAR HAIGHT, of Buffalo, N. Y.—*Improved Paddle Wheel.*—Patent dated January 31, 1860.—In this invention the buckets pass through the air edgewise and strike the water with the fast edge ahead in whatever direction the wheel revolves.

The inventor says: I *claim*, first, the arrangement of the rings F F¹, rods *d*, and trunnions E E¹, or their equivalents, in combination with the buckets D, pins *r*, and guides *e*, or their equivalents, constructed and operating substantially as and for the purpose described.

Second. Giving to the buckets a complete revolution around the pins *b*, from which they are suspended, substantially as specified, so that they strike the water with the fast edge in advance, in whatever direction the wheel revolves.

Third. The employment of the links *c*, substantially as described, for the purpose of connecting the rings F F¹, with the rims A A¹ of the wheel.

No. 26,985.—LEWIS HARPER, of Riceville, N. J.—*Improvement in Fertilizers.*—Patent dated January 31, 1860.—The object of this invention is to provide a fertilizer, the basis of which is green sand, marl of the cretaceous formation, and other chloritic marls of the tertiary formations found in the middle and southern States.

Claim.—The method or process of making a fertilizer, by the employment of the described substances in the manner set forth, consisting of the series of steps specified, and resulting in a single compound or material, substantially as and for the purposes described.

No. 26,986.—FOREST H. HARWOOD, of Rushville, N. Y.—*Improved Mortising Machine.*—Patent dated January 31, 1860.—This improvement relates more particularly to that class of mortising machines which are designed to be worked by the hand or foot of the operator, and some of which are convertible so as to be used as boring machines.

The inventor says: I *claim*, first, the lever A, when hung and constructed to act substantially as described, in combination with the mandrel box H, provided with rollers, jaws, or clips *c c*, at its one side, for the hooked arm *b* of the lever to gear with, essentially as set forth.

Second. The combination, with the sliding mandrel box H, and mandrel raising spring L, of the adjustable upper mandrel roller M, for operating in connection with the lever A, substantially as and for the purposes set forth.

No. 26,987.—WAIT N. HAWLEY, of Hartford, Conn.—*Improvement in Machines for Pegging Boots and Shoes.*—Patent dated January 31, 1860.—By this invention the boot or shoe is secured in or upon a rotating stock, it (the stock) also being secured upon a three-way carriage, one movement being in and out of the machine; a second movement is made in a right line with the machine, and at right angle with the first; and a third movement by the lifting of the whole by means of weighted levers, so that the sole of the boot or shoe shall be firmly pressed upwards against the edge of a rough surface feed wheel, and the sole fed along to the action of the awl and the insertion of the peg, while its edge is held against a gauge and its movement guided by the hands of the operator.

The inventor says: I *claim*, first, an adjustable stock H, secured and operating upon a two-way carriage D E, and the frame C, having a perpendicular movement, arranged and operating as and for the purpose described.

Second. I claim the arrangement of the rough surface feed wheel R, in combination with the adjustable stock H, carriage D E, and frame C, operating as and for the purpose described.

Third. The arrangement of the roughened surface feed wheels R R¹, operating together as and for the purpose described.

No. 26,988.—WILLIAM H. HENDRICK and JOSEPH JACOBS, of Mount Vernon, Ohio.—*Improved Back Rest for Lathes*.—Patent dated January 31, 1860.—This invention consists in having two or more rollers placed in a curved arm or bar, and so arranged as to form a bearing for the work, the lower end of the arm or bar being secured by a bolt in a socket, and fitted loosely on the bolt, so that the device may be readily adjusted to and from the work as may be required, and secured in proper position to the work by a set screw.

Claim.—The curved arm or bar B, provided with two or more adjustable rollers C, and secured at its lower part in a box or socket A, substantially as and for the purpose set forth.

No. 26,989.—LUTHER E. HIGBY, of Shelburne Falls, Mass.—*Improved Pastry Board*.—Patent dated January 31, 1860.—The machine consists of a frame work A A, the side pieces being deeper than the cross piece. The pastry board is fitted in between the side pieces; on the upper side of each of the side pieces is secured a rack H, in which works a pinion I, secured on each end of the rolling pin B, that works to and fro over the pastry board by working the crank C. The pastry board F is made to rise and fall by an inclined plane, which is worked by drawing out the piece E.

Claim.—The combination and arrangement of the frame A, rolling pin B, crank C, pieces D, with an adjustable board F, rack H, and pinion I, substantially as and for the purpose specified.

No. 26,990.—JOEL HOOD, of Milwaukie, Wis.—*Improvement in Car Couplings*.—Patent dated January 31, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement of the coupling pin by its arm to the coupling box, and in relation to the service pin, so that it may be operated as set forth.

Second. The arrangement of the stirrup, with its rollers and links and levers, in relation to the draught bar, so that the bar may be adjusted as described.

No. 26,991.—WILLIAM H. HOPE, of Washington, D. C.—*Improvement in Revolving Cutters, Ice Shavers, &c.*—Patent dated January 31, 1860.—This invention consists in the combination and arrangement of the parts of a machine for cutting ice, &c; also, in the peculiar formation and arrangement of the central knife, or bit, and top and hopper and removable partition, as well as in making a machine that will cut rapidly, from centre to circumference, the whole surface presented to the cutting disk.

Claim.—The peculiar shaped and arranged central bit or knife *c k*, in combination with the revolving disk D, presser P, and hopper H, or with apparatus substantially the same, for the purpose specified.

No. 26,992.—THOMAS P. HOWE, of New York, N. Y.—*Improved Inkstand*.—Patent dated January 31, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the measuring cup, by which the supply of ink to the fountain or dripping cup is accurately graduated, with the piston, and the device for closing the tube at the end of the stroke, substantially as and for the purposes set forth.

No. 26,993.—SAMUEL HOYT, of Wilmington, Del.—*Improvement in Mill Spindles*.—Patent dated January 31, 1860.—This invention consists in combining the metallic eye of the running stone with the driving spindle, so that the stone is allowed a universal movement up and down while it is performing its revolutions.

Claim.—The combination of the sliding plug E, ball and socket bearing C *e* C¹, and slotted spindle B *b*, substantially as and for the purposes set forth.

No. 26,994.—NIKOLAUS HOTZ, of Trenton, N. J.—*Improvement in Nozzles for Hose Pipes*.—Patent dated January 31, 1860.—The inventor says: In this invention I arrange a perforated diaphragm, disk, or plate, of elastic material, within the discharge pipe, in such manner that it shall work in contact with an auxiliary diaphragm, disk, or plate, correspondingly perforated and attached to the nozzle of said pipe, which nozzle is so arranged as to revolve on the pipe to open and close its valve.

Claim.—As a new article of manufacture, a hoze nozzle constructed as set forth.

No. 25,995.—JOHN KEANE, of New York, N. Y., assignor to himself and F. H. BARTHOLOMEW.—*Improved Water Closet*.—Patent dated January 31, 1860.—The nature of this improvement is explained by the claim and engraving.

Claim.—The auxiliary lever *f*, operating the cock or valve that supplies water to the closet, when combined with the pan lever *d*, and pull *e*, substantially as described.

No. 26,996.—JAMES M. KERN, of Morgantown, Va.—*Improved Washing Machine*.—Patent dated January 31, 1860.—This invention relates to the peculiar construction of a washing machine, by which the heavier parts of the dirt which have been separated from the clothes, and which are kept suspended in the suds, are separated from the suds and retained in a chamber of the machine.

Claim.—In combination with the dasher E and inclined board c, the openings d, valve-covered opening g, and filtering diaphragm p, communicating with the chamber R, the whole being arranged and operating substantially in the manner and for the purpose described.

No. 26,997.—LEWIS KIRK, of Reading, Pa.—*Improvement in Brick Machines*.—Patent dated January 31, 1860.—The claim and engravings will give the reader an idea of the nature of this invention.

The inventor says: I *claim*, first, the double hoppers x and z, in combination with the flexible hose v, when constructed and arranged as and for the purpose set forth.

I also claim the flanged box i, and piston j, in combination with the reciprocating mould U, and cross head H, when constructed, arranged and operated as described and for the purpose set forth.

No. 26,998.—A LAFEVER and GEORGE C. BARNES, of Battle Creek, Mich.—*Improved Back Centre for Lathes*.—Patent dated January 31, 1860.—This invention consists in oiling the centre point, or that point against which the wood to be turned abuts, by causing the oil to flow from an oil cup through the end of the shank and to the point of a valve stem which, when not in use, will prevent the oil contained in the oil cup from flowing out; and it further consists in tapping the valve stem in the front end of the shank, and introducing a screw cap so that the self-oiler may be applied to old shanks by removing the old centre points.

Claim.—The valve stem b, spring c, and cup D, applied to the stock or shank A, essentially as set forth, arranged and operating so as to feed oil from a cup or other suitable receptacle to the object to be turned.

No. 26,999.—JOHN W. LATCHER, of Northville, N. Y.—*Improved Printing Press*.—Patent dated January 31, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the employment or use of two platens H H, arranged with two beds E E and used in connection with a frisket U, so arranged as to pass down between one platen and bed to receive one impression, and then rise and pass down between the other platen and bed to receive the other impression, substantially as described.

Second. In combination with the platens, beds, and frisket, arranged as above, an inking device, composed of the cylinder S, distributing rollers i¹, dipping roller e¹, and fountain roller h¹, in connection with the rollers y attached to the frisket U, the whole being arranged for joint operation substantially as described.

Third. Securing the forms B¹ in or upon the beds E E by means of the movable jaws j², fitted in the upper and lower parts of the beds and connected to the right and left screw shafts u², substantially as described, to admit of the simultaneous movement of the upper and lower jaws for the purpose of securing the forms centrally to the beds.

Fourth. Giving the blanket X, of the second impression platen H, a movement by means of the ratchet s*, connecting rods v* v*, shafts w* a², and rod g*, put in motion by the movement of said platen and the stationary pawl t* at the under side of the fly board C, substantially as and for the purpose set forth.

Fifth. The arrangement, as shown, of the crank N, rod P, and radius bar Q, provided with the slotted segment j, in connection with pinions s s, racks t t, and shafts l p, for the purpose of operating intermittently the frisket U.

Sixth. The arrangement of the cam h², hollow cylinder e², and rod d², the latter being attached to the fly by the crank h², for the purpose of operating the fly, as set forth.

Seventh. The operating of the griper shafts r¹ r¹ by means of the double journal boxes g² attached to the hollow cylinder p², the pinions u¹ on the shafts r¹ r¹, the geared segment w¹ gearing into pinion n¹ of the hollow cylinder, the arms x¹ x² provided with springs y¹ y², and the dog z², crank a*, and the pin c** operated upon by the cam h* W, substantially as set forth.

Eighth. Having the gripers s¹ formed of two parts, so that one part d* may slide on the other part e*, for the purpose specified.

Ninth. The employment or use of the paper-feeding apparatus, composed of the disks or rollers o* placed on the shaft p* and the guards q*, directly over the disks or rollers, the above parts being secured at the inner edge of the feed board B, substantially as described.

No. 27,000.—RODOLPHUS LOUNSBURY, of Fulton, N. Y., and FRANCIS G. WILLSON, of Ontario, N. Y.—*Improvement in Horse Rakes*.—Patent dated January 31, 1860.—A is the head of the rake, B the teeth, C the handles, bolted firmly to the head and braced by a strong iron brace D under each, E the slide composed of an inch batten above and another below the teeth, with six blocks between; this slide moves freely from the head to the point of the teeth,

having a small chain F at each end, through which two of the bolts go, while the other end of the chains is held to the head by the leg of the staples G; these chains merely prevent the slide from flying off the teeth.

Claim.—The arrangement of the head A, chains F F, slide board k, teeth B, ropes I I, with knotted ends J and pulleys H H, the whole being constructed for joint operation in the manner and for the purpose described.

No. 27,001.—THOMAS J. MAYALL, of Roxbury, Mass.—*Improvement in Machines for making Rubber Belting.*—Patent dated January 31, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the improvement in the manufacture of machine belting or banding, composed of a woven fabric covered on one or both sides with India rubber or gutta percha, which consists in forming the edges thereof by means of an organized machine having its essential feature substantially as described.

Second. I claim the two revolving cutters arranged upon one and the same shaft to operate substantially in the manner and for the purposes specified, in combination with a suitable device for laterally adjusting the said cutters, so as to be adapted to the cutting off or removing of superfluous gum at the edges of belts of different widths.

Third. I claim the rollers h h, or their equivalent, acting as dies to form the belt and finish the edges thereof.

No. 27,002.—MALCOLM McDOWELL, of New York, N. Y., and NORMAN W. WHEELER, of Brooklyn, N. Y.—*Improvement in Combining Locomotive Engines and Cars.*—Patent dated January 31, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The employment of a car body, substantially as described, in combination with a locomotive capable of action independent of the car, but, when combined therewith, forming the entire support of the forward end of the car, the combination of the two being such as to firmly support the car body, preventing undue oscillation and vibration, while a sufficiently flexible connection is maintained to properly turn curves, &c., all as specified.

No. 27,003.—IVES W. MCGAFFEY, of Buffalo, N. Y.—*Improvement in Straw Cutters.*—Patent dated January 31, 1860.—In operating this machine the material to be cut is placed in the feed box, formed of the side pieces A; the lever F is then grasped by the right hand of the operator and raised so as to bring the gate and cutter c to their highest position. The straw or hay is then moved along by the left hand until the ends but against the cross piece P, the material to be cut sliding up the incline of the flaps J so that it will pass over the edge of knives I.

Claim.—The arrangement of cutters I I, and C, spring flaps J J, triangular cutter n, and corner piece n¹, substantially as described, for the purposes specified.

No. 27,004.—JOHN MEESE, SR., of Milton, Ohio.—*Improvement in Bee Hives.*—Patent dated January 31, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Providing the octagonal hive with central octagonal broad chambers A and A¹, arranged in relation to each other, and to the slides H and boxes B C, in the manner described, for the purpose specified.

No. 27,005.—A. G. MITCHELL, of Lansingburgh, N. Y.—*Improved Machine for Shaping Hair Brush Blocks.*—Patent dated January 31, 1860.—This invention consists in the use of a pattern in connection with guides, the pattern being so arranged that it may be turned on a centre, so as to admit of the shaping of the brush block without removing the same from the pattern; also in the use of an adjustable bed and clamp, so arranged as to admit of the facile manipulation of the pattern which is attached to and centred on said bed.

The inventor says: I *claim*, first, the pattern M, placed on a centre pin l, and so arranged that it may turn thereon and cause both sides of the brush block to be presented to the cutters without changing the position of the block on the pattern or removing it therefrom.

Second. The combination of the bed I and plate H, when connected together, as shown, to operate as and for the purpose set forth.

No. 27,006.—THOMAS MOFFET, of Chicago, Ill.—*Improved Railroad Time Indicator.*—Patent dated January 31, 1860.—This invention consists in placing around the dial of a clock a requisite number of rings between which the names of the different stations are arranged, whereby those having trains in charge may see at a glance the relative position of their time and the approaching station.

The inventor says: I *claim* the plate having the rings B B B, or their equivalents, attached thereto, as and for the purposes specified, in combination with the movable tablets.

I also claim the arrangement of the rings whereby each ring is suitable for two trains, as specified.

No. 27,007.—ISAAC E. PALMER, of Montville, Conn.—*Improved Bed Canopy*.—Patent dated January 31, 1860.—This invention is a portable canopy from which is to be hung a mosquito net.

The inventor says: I *claim*, first, the combination of the foot pieces A hinged together and locked in such a way as to form a clamp, as described, with pieces B B¹ C², when the same are constructed and arranged in the manner and for the purpose of forming a portable and adjustable stand for supporting canopy, Fig. 3.

Second. I claim canopy of Fig. 3, consisting of pieces F jointed together at their centre and connected to hoop or frame C by sliding metal ferrules, all combined as and for the purposes herein set forth.

No. 27,008.—HERMAN SALOSHINSKY, of Boston, Mass.—*Improved Machine for Attaching and Finishing Boot Heels*.—Patent dated January 31, 1860.—This invention consists of a machine for clamping the heel to the boot or shoe, and for punching the necessary holes and driving the nails which secure the heel.

The inventor says: I *claim* the above-described machine, consisting of the blocks G, I, and H, with their awls and drivers, and the mechanism for operating them, substantially as set forth.

Second. I claim, in combination with the above, the trimming knife P, operated in the manner substantially as described.

No. 27,009.—J. S. SANSON, of Philadelphia, Pa.—*Improvement in Railroad Switches*.—Patent dated January 31, 1860.—The object of this invention is to obtain a simple self-acting switch for city railroads, one that may be actuated by the passage of the horse and car over it, so as to be adjusted in line with either the branch or the main track, as may be desired.

Claim.—The tilting plates G G, provided with the flanches *ff*¹ and arranged in relation with the loaded levers H H¹ and the rails A A C C, to operate as and for the purpose set forth.

No. 27,010.—J. SCOVILLE, of Buffalo, N. Y.—*Improvement in Harvesters*.—Patent dated January 31, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination of the hinged lever seat bar E, with the slotted journal boxes D and axis *c*, as and for the purpose shown and described.

Second. The employment of the slotted journal boxes D in combination with the traction wheel C and pinion *d*, as shown and described, whereby said traction wheel is left free to rise and fall independently of the frame A, for the purposes set forth.

No. 27,011.—JOHN SLOAN, of Pittsburgh, Pa.—*Improvement in Balanced Slide Valves*.—Patent dated January 31, 1860.—This invention consists in the use of a wedge shape slide valve, and in an arrangement for balancing the valve.

The inventor says: I *claim*, first, the use of the wedge shaped slide *x*, in combination with the steam chest, said steam chest being adapted in form and size to the form and size of the valve, as described and set forth.

Second. The use of the projection 1 and opening *u*, when used in connection with the guide and guard 2, as described, and for the purpose set forth.

Third. The use of the openings *r* in the valve *x*, when used in connection with the steam chambers *l* in the cap *m* and the steam ports *s* of the cylinder, as described, and for the purpose set forth.

No. 27,012.—C. M. SPENCER, of Manchester, Conn.—*Improvement in Machinery for Spooling Thread*.—Patent dated January 31, 1860.—This improvement of this machine consists in an arm connected to the thread guide, so as to be traversed and vibrated by it, and so as to operate certain other devices, to change the half nuts at the proper time to reverse the motion of the thread guide.

The inventor says: I *claim* the arm *a* in combination with the arms N N, shaft K, arm I, and inclined plane or pin *i*, for the purpose of operating the block L, so as to change the motion of the traverse rod, as described.

I also claim the arm J provided with a slide *m*, constructed so as to operate, substantially as described, in combination with the block L, for the purposes set forth.

No. 27,013.—GEORGE A. STONE, of Roxbury, Mass.—*Improvement in the Apparatus for Superheating Steam*.—Patent dated January 31, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the combination, substantially in the manner and for the purposes specified, of these four things, viz:

First. A superheating chamber provided with flues, or their equivalents, for the passage of heated gases or flame, and with passages for the entrance and escape of steam.

Second. A steam jet pipe leading into a passage or pipe connecting with the flues and receiving steam from the chamber or boiler, and discharging it so as to make or increase a draft through the flues.

Third. A valve in the jet pipe.

Fourth. A rod, or its equivalent, exposed to the heat of the superheating chamber and acting upon the valve, substantially in the manner specified.

The whole combination being substantially such as is described, and acting to supply or furnish superheated steam at a nearly constant temperature.

No. 27,014.—FRANCOIS VOUELLON and FERDINAND TAVERNIER, of Paris, France.—*Improvement in the Manufacture of Yarn*.—Patent dated January 31, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The manufacture of yarn by submitting slivers or rovings made by a carding machine, wool-comber, or otherwise, to a process of felting, as set forth.

No. 27,015.—LOREN J. WICKS, of New York, N. Y.—*Improvement in Skates*.—Patent dated January 31, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The attachment of a hinged or jointed platform to the rigid runner of a skate, when the platform is so connected and attached to the rigid runner as to allow the platform to conform to the spring or movement of the foot of the wearer, as set forth.

No. 27,016.—WILLIAM W. WILCOX, of Middletown, Conn.—*Improved Sail Grommet*.—Patent dated January 31, 1860.—This invention consists of an eyelet separate from the two flanges between which the canvas is secured, so that the flanges can be made of cast-iron, or some other cheap metal, and that, when the grommet has to be taken off, both flanges can be saved and used again, nothing being required to refasten them but a new eyelet.

Claim.—The employment of a separate eyelet C in combination with the flanges A B, as and for the purposes shown and described.

No. 27,017.—JOHN P. WILSON, of Frankfort, N. Y.—*Improvement in Animal Traps*.—Patent dated January 31, 1860.—This invention consists in the method of constructing and arranging the several parts which form the trap.

The inventor says: I *claim*, first, the arrangement of the body A and hammer D with the cord H, pulley G, and barbed rod I, the same being connected and used substantially as and for the purpose specified.

Second. The employment of the stud F, which screws into the end of the body A, and which holds the pulley G, substantially as set forth.

Third. The employment of the screw K, the head of which is provided with the groove n, into which the enlargement I¹ on the rod I passes for the purpose of securing the trap to any object to which it may be attached, substantially as described.

No. 27,018.—ALVAH WORDEN, of Ypsilanti, Mich.—*Improved Holder for Tinman's Shears*.—Patent dated January 31, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The circular revolving perforated metallic or other plate C¹, Fig. 2, so adjusted in the circular metallic or other ring A¹, Fig. 1, that the shears and stakes of the tinner may be placed in the holes D E F G, Figs. 2, 3, or 4, so that, by the rotary motion of the plate C¹, Fig. 2, which is held in place by the bolt, Fig. 3, the workman may, at pleasure, change the position of his shears and stakes without removing or lifting them from their places, and the use of such a combination as a holder or stand for tinner's shears and stakes.

No. 27,019.—McCLINTOCK YOUNG, JR., of Frederick, Md.—*Improved Heel Spur*.—Patent dated January 31, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* my improved equestrian heel spur, the said spur being formed essentially of the heel-shaped open frame a and its projecting hollow arm b, combined with the slit-headed screw shank d and its rotating spur head e, substantially as set forth.

No. 27,020.—GEORGE EDWARDS, of Worcester, Mass., assignor to himself and GEORGE M. RICE, of said Worcester.—*Improved Variable Exhaust Pipe for Steam Engines*.—Patent dated January 31, 1860.—This invention consists in making the flaps or movable portions of the nozzle of a circular section, or nearly so, and sufficiently elastic to cause them to spring out against the sides of the containing case with which they are combined, so that they shall be enabled to scrape off the matter which would otherwise accumulate and stop their motion.

Claim.—The described expanding nozzle, consisting of the elastic curved flaps B B², in combination with the containing case A, operating as set forth, for the purpose described.

No. 27,021.—JOSEPH H. JENKINS, of Smithville, Mo., assignor to himself and ELIJAH W. JENKINS, of said Smithville.—*Improved Saw Mill*.—Patent dated January 31, 1860.—This invention consists in an arrangement whereby the saw, although it is thrown off from the log and made to assume an inclined position as it ascends, is brought against the log and made to retain a perpendicular or nearly perpendicular position while it is descending.

Claim.—The employment of the armed rockshaft I, pitman H, eccentric G, and hinged swinging frame L, in combination with a reciprocating saw sash, in the manner and for the purpose described.

No. 27,022.—RICHARD LAMB, of New York, N. Y., assignor to himself and JOSEPH LAMB, of said New York.—*Improvement in the Manufacture of Artificial Marble*.—Patent dated January 31, 1860.—The claim explains the nature of this invention.

The inventor says: I claim, first, the described method of arranging the veining in artificial marble, that is to say, the separation of freshly mixed cement into balls of irregular sizes by agitating with dry cement, the application of one or more colors to the surfaces thereof, and compressing the balls together before they have commenced to set.

Second. Applying the coloring matter, in the form of a dry powder, to the surface of the balls, substantially as described.

Third. Mixing the coloring matter with pulverized cement, and distributing such mixture in a dry state among the balls, for the purposes set forth.

No. 27,023.—EUGENE M. MIX and JAMES E. MIX, of Ithaca, N. Y., assignors to W. I. HUNTINGTON and HARVEY PLATT, of said Ithaca.—*Improvement in Calendar Clocks*.—Patent dated January 31, 1860.—This invention consists in certain means of governing the movements necessary at the changes of the months, more especially the variable movement in the change from February to March.

Claim.—The employment of a year wheel K and detached leap year wheel L, applied and operating together, substantially as described, in combination with a detent J, or its equivalent, and a wheel F of the construction specified.

No. 27,024.—KINGSLEY R. OLMSTED, of Chicago, Ill., assignor to GILES F. FILLEY, of St. Louis, Mo.—*Improved Sawing Machine*.—Patent dated January 31, 1860.—This improvement consists in so constructing the inclined plane of the self setting apparatus that when the lever on the set rod presses backward with the gidding motion of the carriage, the lever end of said plane rises and allows the fixed arm with the roller at the end of the set lever to pass freely under it, after which the end of said plane drops to its proper position for operating the set lever so as to give the desired set to the log as the feed motion of the carriage again commences.

The inventor says: I claim the combination of the friction roller j, and slotted plate h, with the scale g, hand lever I, set lever H, set rod D, and sliding racks C C, arranged and operating substantially in the manner and for the purposes as specified.

I also claim the combination of the eccentrics o o, and offsetting plates S S, with the bed-plates T T, connecting rod U, and clutch lever O, constructed and operating for the purposes substantially as described.

No. 27,025.—BENEDICT TREUTLER, of Dale, Pa., assignor to Himself and SAMUEL W. WEISS, of said Dale.—*Improvement in the Process of Manufacturing Steel*.—Patent dated January 31, 1860.—This invention consists in the use of cyanide of potassium, sal ammoniac, and borax, which are mixed with the powdered charcoal used in manufacturing shear steel by the process of case hardening, and which, when used in varied proportions, impart to said steel varied degrees of hardness or softness.

Claim.—In connection with pulverized charcoal, the cyanide of potassium, sal ammoniac, and borax, as stated, the whole being used in the manner substantially as set forth.

No. 27,026.—SYLVENUS WALKER, of Boston, Mass., assignor to W. P. SPENCE and J. F. ADAMS, of said Boston.—*Improved Table Leaf Support*.—Patent dated January 31, 1860.—a is a spiral spring used to keep in place the lower end of the brace A, when locked by bearing against the thumb piece or short arm b of the brace; c is a metallic catch to sustain the brace while the leaf is held in a horizontal position.

Claim.—As my invention the joint formed by the brace A, combined with bracket B and spring a, as set forth and for the purpose specified.

No. 27,027.—HENRY B. BARBER, of Scott, New York.—*Improvement in Devices for Raising Water*.—Patent dated January 31, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The gears in combination with the clutch, two armed lever, and bevelled or cam shaped pins P P, substantially as described, for the purpose of automatically changing the

motion of the pulleys H H¹, when the buckets are emptied; the whole being constructed to operate substantially as described for the purposes set forth.

No. 27,028.—GEORGE S. ADLER, of Philadelphia, Pa.—*Improvement in Machines for Polishing Leather*.—Patent dated February 7, 1860.—This invention consists in the combination of a crank wheel I, a polisher j, and rods K L M and N, arranged in respect to each other and to the level table, whereby the proper movement is imparted to the polisher without the aid of the usual knee joints.

Claim.—The rod J, its projecting polisher j, and the crank wheel I, in combination with the rods K L M and N, the whole of the above parts being arranged in respect to each other and to the horizontal bed of the machine as and for the purpose set forth.

No. 27,029.—FRANK A. ALLEN, of Portsmouth, N. H.—*Improvement in Making Plaits in Sewing*.—Patent dated February 7, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim my improved plaiting apparatus as made with the arrangement and application of the bars A B C, and the clamp guide H, as described.

I also claim the arrangement of the recess a, between the bar G, or the slider H, and the table D, when combined with the plaiting apparatus, constructed and operating substantially as specified; the same being so as not only to raise the bar off the table D, but enable the under surface of the bar to lap on the cloth transversely to the plaits formed thereon, the same serving to hold the cloth and plaits to great advantage.

No. 27,030.—JOHN ALLENDER, of New London, Conn.—*Improved Shoe and Bag Holder*.—Patent dated February 7, 1860.—This invention consists in so hanging or hinging one jaw to the other in such a position that when it is applied to a shoe, or other article, and pulled, the vibrating jaw is drawn down against the article held, so as to press against the opposite jaw in such a manner that the harder it is pulled the tighter it holds.

Claim.—The particular arrangement of the jaw C, with reference to the other jaw or stock A, by which the force used in pulling increases the pressure on the shoe or bag, substantially as set forth and described.

No. 27,031.—FRAZEE AYRES, of Rahway, N. J.—*Improved Washing Machine*.—Patent dated February 7, 1860.—This invention consists in the combination of a grooved roller with an endless apron, which is also grooved, and in arranging the roller and endless apron with respect to each other in such manner that while the apron moves slowly and continuously in one direction the roller, by means of suitable mechanism, is made to roll backward and forward under pressure over the apron, with the article to be washed between the roller and the apron partly or wholly immersed in the washing solution.

Claim.—The arrangement of the fluted roller C, raker or rincer x x, and endless apron O, with respect to each other and the other parts of the machine described, when operated in the manner and for the purpose specified.

No. 27,032.—DANA BICKFORD, of Westerly, R. I.—*Improvement in Window Sash Supporter*.—Patent dated February 7, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the flat or sheet spring in combination with the bearings and friction roller, arranged so as to turn freely or stationary one way, as described in my specification.

No. 27,033.—D. F. BOYD, of Mansfield, Ohio.—*Improvement in Defecating Cane Juices*.—Patent dated February 7, 1860.—This invention consists in subjecting cane juice to a bath in a close vessel, in which vessel when steam is applied the steam generated from the juice creates a pressure upon the juice and communicates to it a high heat, and by the combined agency of high heat and pressure the impurities of the juice are precipitated as a preparatory process to evaporating.

Claim.—The operation described with the result, using the steam which arises from the cane juice for pressure.

No. 27,034.—JOHN BUTLER, of Buffalo, N. Y.—*Improvement in Reaping and Mowing Machines*.—Patent dated February 7, 1860.—D is an adjusting and supporting plate lying parallel to the plane of the driving wheel; the bolt e passing through the axle E of the driving wheel supports the plate and forms the axle upon which it turns to adjust the cutters. F is the gear frame in which is placed the gearing transmitting motion from the driving wheel to the cutters.

The inventor says: I claim, first, the adjusting and supporting plate D, in combination with the tubular arm F¹, and lever K, in the manner and for the purpose substantially as described.

Second. The gear frame F, which consists mainly of the tubular arms F^1 and F^2 , the hollow cylindrical part F^3 , collar O, and upward projection u^1 , constructed, arranged, and operating in the manner and for the purposes substantially as set forth.

Third. I claim the combination of the shoe M, gear frame F, and plate D, connected together in the manner and for the purpose substantially as described.

No. 27,035.—GEORGE W. CARTER, of San Francisco, Cal.—*Improvement in Amalgamators*.—Patent dated February 7, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim the amalgamation of gold with mercury by means of a machine which disperses finely divided dry auriferous ore at or near the bottom of a column of mercury, substantially in the manner as set forth.

I also claim the means, substantially as set forth, for preventing agitation of the mercury, consisting of the tube j , shield k , and wings l , whether the same are used separately or in combination.

No. 27,036.—IRA CARTER, of Champlain, N. Y.—*Improvement in Adjustable Carriage Springs*.—Patent dated February 7, 1860.—The object of this invention is to obtain a spring for vehicles capable of being graduated according to the weight to which it may be subjected.

Claim.—Transmitting the weight of the load of a wheel vehicle to its spring M, through the medium of an adjustable lever J, and the lever frames G G, or their equivalents, substantially as and for the purpose set forth.

No. 27,037.—JOHN H. CRANE, of Charlestown, Mass.—*Improved Spring Foundation for Beds, Sofas, &c.*—Patent dated February 7, 1860.—In this invention the bedding or upholstering rests directly upon such slats as are commonly used for similar purposes. The slats rest, toward each of their ends, upon pieces of curvilinear outline, which may or may not be springs in themselves.

Claim.—The combination and arrangement of parts described as forming an elastic foundation for the purpose set forth, the same consisting of the slats c , curvilinear pieces a , and links b , acting together substantially in the specified manner.

No. 27,038.—C. R. DAVIDSON, of Brooklyn, N. Y.—*Improvement in Railroad Brakes*.—Patent dated February 7, 1860.— h shows a cock attached to the locomotive; through this the steam may be made to issue from the boiler into the conducting pipe P. By this pipe the steam is conducted into the cylinder C, and there pressing against the head of the piston rod b , which is connected with connecting rod v , and guided by the slides K C, forces upward the lever A by its connection at the point i .

Claim.—The arrangement of the grooved shoe B, lever A, cylinder C, and spring M, constructed as described, for operating brakes on the rails, as set forth.

No. 27,039.—EDWARD P. DAY, of Boston, Mass.—*Improvement in Braiding Machines*.—Patent dated February 7, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim, when the spring and the ratchet and pawl are so arranged relatively to each other, that a stud or projection from and stationary relatively to the pulley cannot conveniently be made to actuate or trip the pawl, combining with the spring pulley a band or belt d , provided with a ring, or its equivalent, the same being not only to admit the movement of its tripping ring or device toward the pawl and away from the spring pulley, but to so connect the ring with the pulley that the retractive power thereof, or its spring, may be continually in action on the ring.

And I particularly claim the arrangement of the spring pulley, its lifter band and ring, so that the said band and ring may play within the spindle of the lifter while the pulley is arranged outside thereof, as set forth.

No. 27,040.—FRANK DOUGLAS, of Norwich, Conn.—*Improved Steam Trap*.—Patent dated February 7, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim, first, the arrangement of the double valve B, its seats $s t$, passages $c c$, and connecting nozzle d , relative to the outlet of the trap, substantially as described.

Second. The connection of the puppet valve with the float by means of one or more pairs of crossed levers, one pair applied to the valve stem and acting against fixed fulcras, as described.

Third. The spring l , and adjusting screw m , applied in combination with each other and with the valve, substantially as and for the purpose specified.

No. 27,041.—R. H. DUNNING, of North San Juan, Cal.—*Improved Gold Separator*.—Patent dated February 7, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The separator F F, having a secondary or false bottom composed of bars or strips G G, which bars are placed so as to have an opening c c between them, and over the opening or slats b b through the main bottom, the said separator being so arranged with reference to the receiver as to bring the said openings over the receiver, the whole arrangement being so inclined that a portion of the water and the auriferous particles will drop through into the receiver, while the larger gravel and rock will be discharged from the lower end of the separator, outside of the receiver, for the purposes substantially as described.

No. 27,042.—HENRY B. FAY, of New York, N. Y.—*Improved Paddle Wheel.*—Patent dated February 7, 1860.—The object of this invention is to obtain a paddle wheel which shall have a constant propelling action, and which will gradually increase as the floats or propelling wings are submerged, and be diminished as they are drawn up from the water, so that there will be very little if any lifting of water, and so that the greatest effective action of the floats will be in a direction parallel with the surface of the water.

Claim.—The form and construction of the described and represented paddle wheel.

No. 27,043.—ALFRED M. FOOTE, of New York, N. Y.—*Improved Lock for Umbrella Stands.* Patent dated February 7, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the combination of a stationary plate with the revolving lock plate, both of which are provided with notches for entering the umbrella, cane, or other article, when such plates are provided with suitable latches to retain the lock plate when turned, so as to inclose the article, as specified.

I also claim the combination of the latch e and check key f, fitted and acting in the manner and for the purposes set forth.

I also claim the notch 8 in the block 7, combined with the latch e, to afford additional security, as set forth.

No. 27,044.—JACOB FOX, of Philadelphia, Pa.—*Improved Drill Chuck.*—Patent dated February 7, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A ball, divided into two or more parts, with a taper hole passing through its centre, in combination with a tapered drill shank or spindle, substantially as specified, for the purposes set forth.

No. 27,045.—WILLIAM A. GIBSON, of New York, N. Y.—*Improvement in the Disengagement of Self-acting Brakes.*—Patent dated February 7, 1860.—This invention relates to an improvement in that class of brakes for wheel vehicles in which the brake is actuated through the medium of the draught pole, without any direct or special manipulation on the part of the driver, and are consequently termed self-acting.

Claim.—The levers E E, with the shoes F F attached and connected to the slide bar D, in connection with the lever I, the above parts being applied to the vehicle, and arranged in relation with the draught pole H, substantially as and for the purpose set forth.

No. 27,046.—WILLIAM B. GILLET, of Auburn, N. Y.—*Improvement in the Method of Sharpening Files, &c.*—Patent dated February 7, 1860.—This invention consists in decomposing a solution of acid, or of a salt, by passing a current of electricity or galvanism through the said solution in such a manner that the oxygen or other corrosive element, upon being liberated, shall attack and dissolve the substance of a file immersed in the said solution.

Claim.—The application of the electro-chemical process described, for the purpose of recutting or sharpening steel rasps and files in the manner aforesaid, or any other substantially the same, and which will produce the intended effect.

No. 27,047.—R. D. GRANGER, of Albany, N. Y.—*Improvement in Cooking Stoves and Ranges.*—Patent dated February 7, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Making the ovens of cooking stoves and ranges with one or more of the plates thereof made of cast iron, with the inner surface thereof enamelled, substantially as and for the purpose set forth.

No. 27,048.—JOSEPH M. HEARD, of Aberdeen, Miss.—*Improvement in Moth Traps.*—Patent dated February 7, 1860.—This invention consists in the use of a lamp provided with a peculiar light bait reservoir, and cover, so arranged that moths and other insects are decoyed and destroyed.

Claim.—The arrangement of the circular projecting top D, lamp C, formed of the triangular plates c, phosphoric illuminator E, and reservoir or basin A, as and for the purpose shown and described; the whole being constructed as set forth.

No. 27,049.—R. HECKSCHER, of New York, N. Y.—*Improvement in Coal Carts*.—Patent dated February 7, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, arranging the box F of a coal cart with two or more compartments *b c*, with their bottoms inclined longitudinally or at right angles to the axle C, each with a separate door *g* and *h* in the end, substantially as and for the purpose described.

Second. The arrangement of the trap door *f*, in combination with the compartments *b* and *c*, and with the doors *g* and *h*, constructed and operating substantially as and for the purpose specified.

Third. Forming the inclined bottoms of the compartments *b* and *c*, with the curved end *c*¹, as and for the purpose described.

No. 27,050.—HENRY WILLIAM HINDSLEY, of New Haven, Conn.—*Improvement in Piano-forte Keys*.—Patent dated February 7, 1860.—This improvement consists in making the upper part of the black keys for piano-fortes, &c., of a composition of gum lac and saw-dust, with a plate or slip of glass pressed into the upper surface to keep the surface smooth and also to serve as an ornament.

Claim.—The combination of the glass with the composition when the two are connected, without the use of any intervening adhesive substance, and the article is constructed and fitted for use substantially as described.

No. 27,051.—SILAS H. HODGES, of Rutland, Vt.—*Improvement in Railroad Switches*.—Patent dated February 7, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A switch *c* and catch *e* used in connection with rails, all constructed and arranged as described, the switch being attached to the switch rod only by the catch, so that it will be held firm and insure an engine taking the side track for which it is adjusted, though it will be disengaged and thrown aside by an engine coming on the other track, and leave it a free passage, as shown above.

No. 27,052.—I. HODGSON, of Indianapolis, Ind.—*Improvement in Metallic Shutters*.—Patent dated February 7, 1860.—This invention consists in a peculiar way of connecting the slats of the shutter together and folding the same, so that a simple metallic shutter is obtained.

The inventor says: I *claim*, first, the guides D D attached to the inner sides of the jambs A, provided with expanded parts to form recesses D¹, to admit of the folding of the slats E, substantially as described.

Second. Connecting the slats E of the shutter together by means of the tubular pintle *b*, in connection with the eyes *a*, as set forth.

No. 27,053.—A. D. HOFFMAN, of Belleville, Mich.—*Improved Cross Cut Sawing Machine*.—Patent dated February 7, 1860.—This invention consists in the employment of a circular saw attached to a hinged or jointed bed, and arranged in such relation with a "buck," or wood holder, as to effect the desired end.

Claim.—The combination with the buck A, of the pivoted self-acting bed or saw carrier B, gears *e f*, lever F, and treadle G, as and for the purpose shown and described.

No. 27,054.—JAMES M. JAY, of Canton, Ohio, assignor to himself and JOHN DANNER, of said Canton.—*Improved Egg Beater*.—Patent dated February 7, 1860.—A is the stand upon the top of which is secured the lower half of the case A, which case is in the form of a hollow half globe. The cap or top C is also made in the form of a hollow half globe, so that when both the parts, B and C, are in the position shown in the engravings, they form a hollow globe. The lugs D are cast, or otherwise fastened to the upper part of one side of B, while on the other, and nearly opposite thereto, a lip F is similarly fastened.

The inventor says: I *claim*, first, making the case or shell of an egg beater in the form of a hollow globe or sphere, substantially as set forth.

Second. I claim the combination of a circular beater or beaters with the parts B and C, substantially as set forth.

Third. I claim the combination of the parts G E and D F with the parts B C, substantially as set forth.

No. 27,055.—ROBERT W. JENKS, of Providence, R. I.—*Improvement in Railroad Gates*.—Patent dated February 7, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the employment or use of the sliding and stationary plates D E, slotted obliquely as shown, and having the journals *d* of the posts *a* fitted in the slots, substantially as and for the purpose set forth.

I also claim the means employed for operating automatically the sliding plates D, to wit: the rods F F¹, attached respectively to the bars G H, the rods at either side of the track being

connected by a lever I, when the said posts are used in connection with the swinging frames K, attached to the sides of the locomotive or tender and elevated by the levers L, and the projections *l* of the frames, and the projections *o o** on the side of the track, as set forth.

No. 27,056.—JAMES JONES, of Rochester, N. Y.—*Improved Hinge*.—Patent dated February 7, 1860.—The object of this invention is to provide a hinge that shall be self-acting when all its parts act conjointly, and at the same time answer equally well as a hinge of ordinary construction when one of those parts is removed.

The inventor says: I *claim* the use of the free movable ball *b*, in combination with an inclined groove or channel *d*, or of two reverse inclined grooves in the joint or bearing surfaces of the hinge, substantially in the manner and for the purposes set forth.

I also claim forming the recesses *c c*, at suitable points in the contiguous surfaces of the parts, in combination with the ball *b*, for the purpose of fastening the hinge when opened, substantially as herein described.

No. 27,057.—WILLIAM H. LAZELLE, of New York, N. Y.—*Improvement in Converting Rotary into Reciprocal Rectilinear Motion*.—Patent dated February 7, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination, with a rotary shaft B and a slotted rod or slide C, of a compound crank D *c* E F *e* *f*, constructed and applied substantially as described, in connection with a stationary eccentric or way *d*, for the purpose of obtaining an irregular rectilinear movement of the said rod or slide by the rotary movement of the said shaft.

No. 27,058.—JOHN W. LOCKWOOD, of New York, N. Y.—*Improved Head Rest*.—Patent dated February 7, 1860.—This invention consists in providing a support for the head by means of a strap passing around the body and connected with strips of metal, or other material, resting upon the chest or shoulders, which at their upper extremities are connected with a similar strip passing behind the head, which last named strip is covered with a cushion or pad.

Claim.—A supporter for the head by the combination and arrangement of parts A B B C C, and strap D, substantially as above described.

No. 27,059.—CHELTON MATHENY, of Greensburgh, Ind.—*Improvement in Hand Spinning Wheels*.—Patent dated February 7, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the vibrating arm which carries the spindle and its bearings so that said arm shall move in a horizontal plane and the spindle be sustained in the vertical position, substantially in the manner and for the purpose set forth.

No. 27,060.—THOMAS J. MAYALL, of Boston, Mass.—*Improvement in Machine Belting*.—Patent dated February 7, 1860.—The claim and engravings explain the nature of this invention.

Claim.—As a new article of manufacture, machine belting made substantially in the manner and for the purposes described, with a friction surface formed partly or wholly of India rubber or gutta percha, while the cotton or other fabric which is thus covered is in a single sheet or ply and free from interposed rubber or other cement.

No. 27,061.—WILLIAM S. MEAD, of Buffalo, N. Y.—*Improvement in Apparatus for Generating Vapor in Lamps*.—Patent dated February 7, 1860.—This improvement is used in connection with an elevated reservoir for supplying etherial oil, or common burning fluid to the generating apparatus.

Claim.—The employment of the frustrum *a*, provided with a spiral thread and encased within the heater C, the same being arranged substantially as and for the purpose specified.

No. 27,062.—JOSEPH B. MAXWELL and JAMES A. MAXWELL, of Allegheny, Pa.—*Improvement in Bellows*.—Patent dated February 7, 1860.—This invention consists in making the nozzle and nozzle head of bellows in one piece, and in furnishing the nozzle head with a self acting valve, flanges, lugs, pivots, and attachment plate.

Claim.—The arrangement of the flanges *c*, attachment plate *g*, recess *x*, lugs or flanges *e*, pivots *f*, and self-acting valve *h*, as described and for the purpose set forth.

No. 27,063.—WILLIAM A. MORSE, of Boston, Mass.—*Improved Pen Handle*.—Patent dated February 7, 1860.—The inventor says: I make a pen stock of two pieces A and D; the part D I provide with a knife H; I connect these parts by means of a cylinder F, which serves as a sheath for the knife. The part D and knife H, when drawn out of the cylinder, may be used as an eraser, paper cutter, or pencil sharpener.

Claim.—The cylinder F, in combination with the parts A and D, and knife H, when the whole is constructed and connected substantially as described.

No. 27,064.—EMERY PARKER, of West Meriden, Conn.—*Improvement in Bolts for Door Locks.*—Patent dated February 7, 1860.—This improvement lies in the manner of constructing and inserting the smaller locking bolt, which is moved by a knob extending through the outer plate of the lock.

Claim.—The manner of constructing and inserting the smaller locking bolt specifically as described.

No. 27,065.—JOHN PARKER and EDMUND PARKER, of Meriden, Conn.—*Improved Coffee Mill.*—Patent dated February 7, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim* the manner described of preventing the grinding surfaces from coming in contact, that is to say: by so constructing the grinding cone that its smaller end shall come to a bearing against the plate C, in the manner and for the purposes set forth.

We also claim the projecting piece g, in combination with the enlarged portion of the delivery aperture for the purpose set forth.

We also claim the manner of affixing the hopper, specifically as described.

No. 27,066.—NORMAN PLATT, of Jackson, Miss.—*Improved Life Preserver.*—Patent dated February 7, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The employment of the bellows C, or their equivalent in effect, secured to the body and sleeves of the preserver, and having a tube communicating with the air space of said preserver, and being so arranged as to be operated by the motion of the arms of the wearer in such manner as to inflate the preserver with air, substantially as and for the purposes set forth.

No. 27,067.—JULIEN QUÉTIL, of New York, N. Y.—*Improvement in Apparatus for Moving Heavy Weights.*—Patent dated February 7, 1860.—The object of this invention is to transport heavy weights, such as large logs, blocks of marble or stone, heavy pieces of machinery, &c., from one place to another. The apparatus is so arranged that such weights can be transported up hill and over rugged ground.

The inventor says: I *claim*, first, the arrangement of the bridge A, in combination with the lifting jacks B and C, and with the frame F, or their equivalents, substantially as and for the purpose specified.

Second. The combination, with the frame F, or its equivalent, and with the bridge A, of the windlass E, substantially in the manner and for the purpose set forth.

No. 27,068.—ADOLPH H. RAU, of Philadelphia, Pa.—*Improved Station or Street Registering Indicator.*—Patent dated February 7, 1860.—This invention consists of a rim or dial, carrying the numbers or names of the streets or stations, provided with certain devices for turning and holding said rim or dial.

The inventor says: In combination with the rim or dial carrying the numbers or names of the streets or stations, I *claim* the devices, substantially described, for turning and holding said rim or dial.

No. 27,069.—SAMUEL RAY and M. R. SHALTERS, of Alliance, Ohio.—*Improved Combined Chair and Crib.*—Patent dated February 7, 1860.—The object of this invention is to combine a rocking chair and crib in such a manner that the device may be used for either purpose.

Claim.—The permanent bottom A, supplemental bottom B, permanent arms D, and supplemental arms E, with traverse frame F attached, and the turning and the sliding leg and rocker frame g, formed of the bars *a a d* and *f f g*; the whole being combined and arranged as and for the purpose set forth.

No. 27,070.—AUGUST REICHARD, of Washington, Mo.—*Improvement in Pumps.*—Patent dated February 7, 1860.—F is a frame to which the pump cylinder C and air chamber A are permanently attached; P is a hollow piston and piston rod, furnished with a valve V. The motion is communicated through the lever M and connecting link N to the hollow piston P.

Claim.—Combination of the valve B and lever L, valve V, and its rod and rest T, with the hollow plunge or piston P, arranged and operating substantially as described.

No. 27,071.—HENRY A. RIDLEY, of Somerville, Tenn.—*Improved Rat Trap.*—Patent dated February 7, 1850.—This invention consists in providing a box with a trap door and a sash

door, so connected and operated by means of levers, cog wheels, and springs, that, when the sash door falls, it also forces down the trap door; after which, by means of a simple mechanism, it immediately resets itself.

Claim.—Operating the doors B and C, by the rods and levers 2 u I¹, in combination with the cog sector F, and interrupted cog wheel E and click wheel G when operated by the spring L, or its equivalent, in the manner described and for the purpose specified.

No. 27,072.—AUGUSTE ROLLAND, of Toulouse, France.—*Improvement in Fertilizers.*—Patent dated February 7, 1860.—This compound is composed of the following ingredients: Alum, 7 parts; sulphate of iron, 29 parts; sulphate of soda, 36 parts; sulphate of lime, 25 parts, and 3 parts of sulphuric acid.

Claim.—The mode or method of manufacturing a fertilizing compound by the employment of the ingredients set forth, substantially as and for the purpose described.

No. 27,073.—W. H. ROUNDS, of Campello, Mass.—*Improved Machine for Trimming, Chamfering, and Skiving Leather.*—Patent dated February 7, 1860.—The claim and engravings explain the nature of this invention.

Claim.—In combination with a feeding and gauging mechanism, the slotted arc H and knife stock I, so that the knife or cutter *f* may have the range of adjustment represented, to adapt the machine to the varied purposes mentioned, substantially as described.

No. 27,074.—CHARLES A. RUFF, of Boston, Mass.—*Improvement in Skates.*—Patent dated February 7, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* an improved skate as made or provided with clamping devices, by which it may be clamped, substantially as described, to the edge of the sole or bottom edge of the sole and heel of the shoe or boot of a person.

I also claim the combination and arrangement of the toe clamp, the lateral lever clamps, the wedge, and the screw, to operate substantially as described.

I also claim the combination of the movable toe clamp with the heel abutment *a*, and the adjustable toe clamp, such clamps being provided with screws or equivalents for moving them, as described.

No. 27,075.—SOLOMON RUTHENBURG, of Indianapolis, Ind.—*Improvement in Shingle Machines.*—Patent dated February 7, 1860.—This invention consists in providing an alternate lever guide for producing a rocking movement in the block table, from which the point of the shingle is alternated from one end of the block to the other.

Claim.—The guide clicks *c c*, when constructed as set forth, in combination with the vibrating block table O, through lever L, operating in conjunction with my machine, substantially as set forth in the foregoing specification.

No. 27,076.—J. C. RUTHERFORD, of Derby Line, Vermont.—*Improved Solution for Toning Photographs.*—Patent dated February 7, 1860.—This solution is composed of the following ingredients: Corrosive sublimate, 2 drachms; tartaric acid, 12 drachms; sal soda, 2 drachms; hydrochloric acid, 30 drops; aqua dist., 12 ounces. After this solution is mixed it is allowed to stand forty-eight hours and then filtered, when it is ready for use.

Claim.—The toning solution composed of the within specified materials, combined in the manner and in about the proportions set forth.

No. 27,077.—S. W. RYCKMAN, of Pontiac, Mich.—*Improvement in Corn Shellers.*—Patent dated February 7, 1860.—This invention consists in the use of a rotary toothed cylinder, elastic bearing plates, inclined bed piece, endless feed apron, and a fan so arranged that corn shelling may be done in an expeditious manner.

The inventor says: I *claim*, first, the elastic apron G, provided with plates or buckets *g*¹ and strips *h*, in connection with the cylinder C, plates *f*, and inclined bed piece E; the whole being arranged for joint operation substantially as described.

Second. The yielding bar I, placed at the inner end of the feed trough H, and arranged to operate in combination with the apron G, as and for the purpose specified.

No. 27,078.—W. W. SKINNER, of Davenport, Iowa.—*Improved Machine for Bending Mould Boards for Ploughs.*—Patent dated February 7, 1860.—The stave I, flanges G G, and shaft F are made to revolve by means of a wheel N operated upon by pinion O on the shaft P, to which is attached a crank or arms for the purpose of operating the same.

Claim.—The stave I, (or staves I,) roller Q, bolts K, and movable set screw L, when combined, arranged, and operated in the manner and for the purpose set forth.

No. 27,079.—JOSIAH M. SMITH, of Somers, N. Y.—*Improvement in Sewing Machines*.—Patent dated February 7, 1860.—The stitch made by this machine is that known as the "double tambour stitch," each thread passing through the loop of the other thread, the second needle receding as the first one descends and passes through the loop formed by the second thread, and advancing as the first ascends to pass through the loop formed by the first thread.

Claim.—The arrangement of the bars C and G, and the connecting rod H, as shown, for the purpose of operating, at their proper times, the two needles, as described.

No. 27,080.—V. O. SPENCER and J. R. SPENCER, of Mansfield, Pa.—*Improved Animal Trap*.—Patent dated February 7, 1860.—This invention consists in the use of a revolving partition placed within a suitable box and provided with a treadle catch, bait box, and a discharge opening, whereby the device may be placed over a vessel containing water and the animals entrapped and destroyed at the same time.

Claim.—The revolving partition C within box A, actuated by the cord and weight, or its equivalent, the spring treadle or platform D with catch *h* attached, the bait box *l* and the opening *a* in the compartment *d*; the whole being combined and arranged as and for the purposes specified.

No. 27,081.—E. H. STEARNS, of Cincinnati, Ohio.—*Improved Method of Rossing Saw Logs*.—Patent dated February 7, 1860.—The rotary cutters revolve in the direction to strike under their axis against the direction of motion of the log, so cutting outward and throwing the dirt upon the surface instead of cutting through it.

The inventor says: I *claim*, first, the combination of the rotary and drawing cutters C V with a movable carrier A or R, made governable with reference to the uneven surface of the log, substantially as and for the purpose set forth.

Second. I claim the arrangement of the rotating roller G in combination with the lever L, or its equivalent, so as to be operated thereby substantially as and for the purpose set forth.

No. 27,082.—JOHN THOMSON, of Worcester, Mass.—*Improvement in Sewing Machines*.—Patent dated February 7, 1860.—This invention relates to the means of controlling the movements of the needle thread and concatenated second thread.

Claim.—The combination of the shield or needle guide *h* with the spring finger *i*, in the manner and for the purposes specified.

No. 27,083.—WILLIAM TINSLEY, of New York, N. Y.—*Improved Animal Trap*.—Patent dated February 7, 1860.—The escapement consists of a vertical pillar turning on pivots between two buckets attached to the end of the box, and at a point between the arbor of the wheel and the nearest side of the box; said pillar has three arms B C D projecting horizontally at different angles and points of elevation.

Claim.—I rest my claim upon the self-setting escapement of the pillar with its three arms, as set forth.

No. 27,084.—PHINEAS TOPHAM, of Newark, N. J.—*Improved Price Indicator*.—Patent dated February 7, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Combining with a series of figures B, or its equivalents, a number of hinged strips *b*, with additional hinged strips *c*, or their equivalents, substantially in the manner and for the purpose specified.

No. 27,085.—ELMER TOWNSEND, of Boston, Mass.—*Improvement in Pegging Machines*.—Patent dated February 7, 1860.—This invention consists in preparing the blank to give the required point to the peg before splitting it from the blank; also, in an improved method of cutting the pegs from the blank as they are used in the machine.

The inventor says: I *claim*, first, pointing the peg on the pegging machine, substantially as described.

Second. I claim the inclined knives N, operating substantially as set forth, to cut the peg from the blank.

No. 27,086.—CHARLES B. WOOD, of New York, N. Y.—*Improvement in Safety Straps for Securing Carriage Thills*.—Patent dated February 7, 1860.—This invention consists in having cylindrical clips attached to the front axle of the vehicle, and encompassing both the bed and axles, and having eyes attached to the inner ends of the thills, which are fitted to the clips and allowed to turn freely thereon.

Claim.—The clips C, formed of two longitudinal parts *a b*, to admit of being securely fitted to the bed B and axle A, in connection with the eyes D attached to the thills, and arranged so as to encompass the clips, substantially as described.

No. 27,087.—CHARLES B. WOOD, of New York, N. Y.—*Improvement in Safety Straps for Securing Carriage Thills*.—Patent dated February 7, 1860.—This invention relates to an improvement in straps that are attached to the thills and axles of vehicles, in order to guard against accidents that might occur from the breaking of the permanent metal connections used for securing the thills to the axles.

Claim.—The strap F, formed by two parts *c d*, provided with a ring *e*, and applied to the axle and thills, substantially as and for the purpose set forth.

No. 27,088.—PHILANDER DANIELS, of Le Roy, N. Y., assignor to CLARK DANIELS, of said Le Roy.—*Improvement in Tanning*.—Patent dated February 7, 1860.—The claim explains the nature of this invention.

Claim.—An improved process of tanning, consisting in combining with the tanning solution tartaric acid, sal soda, and bichromate of potash, substantially in the order, proportion, and manner specified.

No. 27,089.—C. H. THOMPSON, of Orange, Mass., assignor to himself, GEORGE CARPENTER, and J. S. EMERY, of said Orange.—*Improved Tuyere*.—Patent dated February 7, 1860. This invention consists in the use and application to a tuyere of a straight forked valve, with one prong longer than the other, to operate, in combination with the openings *a b c*, in the top of the air box, so that one, two, or three of said openings, or one and part of the others may be used for admitting air.

Claim.—The forked valve E, constructed, arranged, and operating in combination with the perforated top of the air box, substantially as set forth and for the purposes described.

No. 27,090.—ALBERT C. RICHARD, of Newtown, Conn.—*Improved Wrench*.—Patent dated February 7, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The peculiar construction and arrangement of the screw wrench described, having the shank *a* made broad near the outer or fixed jaw *h*, and provided with the female screw or nut *f* as part of said shank, in combination with the sliding jaw operated by a screw, substantially as set forth, for the purposes described.

No. 27,091.—L. ACREE, of Taliaferro County, Ga.—*Improvement in Cotton Seed Planters*.—Patent dated February 14, 1860.—This invention consists in interposing between the main hopper, or seed container, and the toothed feed roll, a shaking hopper, that is agitated by the machine as it is drawn or pushed over the ground.

The inventor says: I *claim* the combination of the hopper H, shaking box G, and revolving feed roller F, arranged, combined, and operating together in the manner and for the purpose stated.

I also claim hinging the coverers to the main frame through the slotted hinges *v*, so that said coverers may follow the ground without being influenced by the frame, as set forth.

No. 27,092.—GEORGE C. AIKEN, of Nashua, N. H.—*Improvement in Cultivator Teeth*.—Patent dated February 14, 1860.—The tooth, consisting of the tenon *a*, vertical coulter A, mould boards or flanges C C, and smaller ploughs D D, are all made of iron and cast in a single piece. The front of the tooth is brought to an edge and shaped in the form of a sled runner, so as to pass more readily over obstructions.

Claim.—The combination and arrangement of the fixed plate B, vertical coulter A, flanges or mould boards C C, and cutters D D, substantially as set forth.

No. 27,093.—WILLIAM L. ALDRICH, of Atlanta, Ga.—*Improved Press for Attaching Leather to Billiard Cues*.—Patent dated February 14, 1860.—The engraving represents part of a cue fastened in the frame D to receive the leather, which is worked by the thumb screw mark A, under the lever E. C is the socket for the leather, worked by the thumb screw B.

Claim.—The combination and arrangement of the thumb screws A and B, frame D, lever E, and socket C, substantially as and for the purpose specified.

No. 27,094.—ETHAN ALLEN, of Worcester, Mass.—*Improvement in Machines for Making Percussion Cartridge Cases*.—Patent dated February 14, 1860.—This invention consists in an arrangement to trim the open end, to make all alike true, and also in striking up the swelled end to form the recess for the priming, as shown at Z, from that of Y, at one stroke, in contradistinction from spinning them.

The inventor says: I *claim*, first, the trimming mechanism composed of the sliding loose mandrel C, the revolving chuck mandrel S, and automatic tool, when constructed and operating substantially as described.

Second. I *claim* striking or forming the hollow rim at one stroke or operation, as above set forth and described.

No. 27,095.—HENRIETTA G. BATTY, of Springfield, Mass.—*Improved Spring Egg Cup*.—Patent dated February 14, 1860.—This invention consists in providing a small metallic standard with six or more elastic springs or arms, curved outwardly, and open at the top for the admission of the egg.

Claim.—The construction and arrangement of the elastic springs B B attached to the metallic standard A A, the movable pin or slide C C passing through the standard A A, in the manner and for the purposes substantially as set forth.

No. 27,096.—JOSEPH BERRY, of New York, N. Y.—*Improved Cut Nail Machine*.—Patent dated February 14, 1860.—This invention consists in the combination of a rotating cutter head provided with a series of cutters set obliquely in reverse directions, alternately, to the plane of the face of the cutter head, and an anvil and die oscillating on an axis perpendicular to the axis of the rotating cutter head.

The inventor says: I *claim*, first, the arrangement of the cutters *a* upon the face of the cutter head F, near the centre thereof, substantially as and for the purpose shown and described.

Second. The arrangement of the vibrating anvil J, cam-shaped groove G, anvil shaft K, arm P, rod M, lever Q, as and for the purpose shown and described.

No. 27,097.—HARRIS BOARDMAN, of Lancaster, Pa.—*Improvement in Metallic Carriage Hubs*.—Patent dated February 14, 1860.—This invention consists in having a metallic hub with chambers to receive the spokes, and the arrangement of clamp plates and wedges for tightening the spokes.

Claim.—The arrangement and combination of the clamp plates E and wedge D as attached to the chambered metallic hub, substantially as described and for the purposes set forth.

No. 27,098.—EDMUND BRICKETT, of Minot, Me.—*Improved Braces for Harness Breeching and Breast Plates*.—Patent dated February 14, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The application to harnesses of metallic breeching and breast plate braces, with the rings and shanks connecting with the braces, as described, using for that purpose the aforesaid metallic substance, or any other metallic substance suitable for that purpose.

No. 27,099.—ROBERT H. BROOKS, of Greenville, Ga.—*Improvement in Ploughs*.—Patent dated February 14, 1860.—P P are flat pieces of iron attached by bolts or rivets to each side of the beam A at Q, and, extending back, are connected with the screw bolt G, with the standard C and the handles E E. By this arrangement the opening R in the end of beam A is formed. The standard B passes through the opening R, and by the action of the screw bolt F it is held firmly in its place.

Claim.—The arrangement of braces D D C, holes H O V I, screw bolt T, pieces P P, opening B, beam A, standard B, heel screw W, notch X, and opening g, constructed as described for the purposes set forth.

No. 27,100.—ROBERT F. BROWER, of New York, N. Y.—*Improved Rotary Steam Engine*.—Patent dated February 14, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The methods or devices, substantially as described, which serve as steady and regular points of counter resistance to the direct action of steam, when employed in a series of diverging cylinders, which revolve eccentrically to the centre of motion of the driving wheel, without the aid of any other separate movable parts, such as valves or springs.

No. 27,101.—THOMAS W. BROWN, of Boston, Mass.—*Improved Twine Holder*.—Patent dated February 14, 1860.—In constructing the stand and box each is to be formed in two separate parts a^1 , b^1 , each of the parts a^1 being arranged directly over and affixed to one of the parts b^1 , and each two parts $a^1 b^1$ being cast or formed in one solid piece of metal or other suitable material, as shown in the engravings.

Claim.—The improved twine holder, as made substantially in manner and so as to operate as described.

No. 27,102.—JOEL BRYANT, of Brooklyn, N. Y.—*Improvement in Grinding Mills*.—Patent dated February 14, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, in the construction of portable grinding mills the cog wheels C^1 , C^2 , and C^3 , when constructed, set, and operating in connection with each other, and the cylinders A and B of the said mills, substantially as described and for the purposes set forth.

Second. And, in connection with the above, I claim the making, setting, and gearing of the body M of portable grinding mills, so as that the said mills (Fig. 1) may be set to run and

grind at any desirable plane of the horizon, either vertical, or horizontal, or oblique, substantially as described and for the purposes set forth.

No. 27,103.—RICHARD B. BURCHELL, of Brooklyn, N. Y.—*Improved Mosquito Nets and Shades for Windows*.—Patent dated February 14, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Attaching a window shade or mosquito net C to a roller B and rods $a^1 a^1$, which are fitted in tubes c c, said shade or net having its lower end attached to a bar D provided at its ends with double guides or gibbs E, which are fitted on rods $a^1 a^1$, the whole being applied to the window frame and arranged to operate as and for the purpose set forth.

No. 27,104.—JOHN F. BURGIN and AUGUSTUS KOCH, of Williamsport, Pa.—*Improved Hydraulic Engine*.—Patent dated February 14, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement for converting the rectilinear alternate motion into a rotating one by means of water or any other non-elastic fluid whose force, derived from an artificial pressure, causes a wheel to turn around its axis, as described.

No. 27,105.—SAMUEL BUSER and JOHN H. BUSER, of Warren, Ill.—*Improvement in Harvesters*.—Patent dated February 14, 1860.—This invention relates to a novel cutting device, and an improved arrangement of means for regulating the position of the same to determine the height of the cut and to facilitate the raising and lowering of the cutting device, so that it may pass over any obstructions that may be in its path.

Claim.—The combination of the frames A E hinged at c c, with the elevating devices, viz: the rack bar I, shaft o, chain M n, and sliding castor wheel O, arranged to operate in the manner and for the purpose shown and described.

No. 27,106.—ABNER CAREY, of Rome, Ga.—*Improvement in Cultivators*.—Patent dated February 14, 1860.—This invention relates to that class of implements having one or more pairs of ploughs or shares adapted to hilling up the ground, and consists in an arrangement by which the ploughs, being adapted to be adjusted in working depth, may also be capable of receiving adjustment laterally, so that the ploughs may be set to work at any distance apart within the compass of the frame.

Claim.—The described arrangement of the ploughs H, beams G, and perforated rails D, the whole being constructed and combined in the manner and for the purposes set forth.

No. 27,107.—ABNER CAREY, of Rome, Ga.—*Improvement in Cotton Seed Planters*.—Patent dated February 14, 1860.—The operation of this invention is thus described: The hopper E being supplied with seed and the clutch pulleys c and b thrown in gear, the machine is drawn forward, the effect of which is to rotate the hopper E and picker K in the same direction, causing their adjacent parts to move in opposite directions, as indicated by the arrows. By this means the seed is taken from the hopper in a continuous and uniform stream, and through the agency of the spout M and tube N, deposited in the furrow formed by the tooth O, after which it is immediately covered and the earth compacted sidewise about it by the double conical roller P.

Claim.—The combination of the horizontal conical hopper E and duplex, saw-shaped feeder K, constructed, arranged, and operating substantially as and for the purposes set forth.

No. 27,108.—JOSEPH B. CHARLES, of Ashland, Ohio.—*Improvement in Fan Blowers*.—Patent dated February 14, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Giving a concave or recessed shape to the faces of the fanning wings f at the same time that the oblique eduction apertures i i are formed opposite said wings, in the sides of the fanning chamber, substantially in the manner and for the purpose set forth.

No. 27,109.—ELIJAH B. CLARKE, of Tallahassee, Fla.—*Improvement in Ploughs*.—Patent dated February 14, 1860.—This invention consists in a combination of diagonal cross bars with a longitudinal brace, the whole being bolted together and secured rigidly to a plough beam in such a manner as to form a braced standard for the shovel, admitting of its being readily attached and detached.

Claim.—The arrangement of the longitudinal bar D, shovel E, double brace C^1 , double brace C, bolt c, projection d, beam A, and handles B, as and for the purpose set forth and described.

No. 27,110.—HENRY E. CLINTON, of Woodbridge, Conn.—*Improvement in Carriage Thill Attachments*.—Patent dated February 14, 1860.—This invention consists in constructing the

shaft eye so as to hook upon the jack bolt, and is secured in its place by means of a spring key, thus doing away with the nut and screw which is now in use.

Claim.—The application of the spring key B, substantially, and for the purposes, as is herein set forth.

No. 27,111.—JOHN W. COLEMAN, of Medway, Mass.—*Improvement in Stoves.*—Patent dated February 14, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the sliding doors B and B with the stove A and oven G, so that the heat from around the cylinder of the stove may be confined within or entirely cut off from the oven, by closing or opening said doors in the front or back of the stove, the whole being constructed and operated substantially in the manner and for the purpose set forth.

No. 27,112.—THOMAS DANIELS, of Toledo, Ohio.—*Improvement in Stop Cocks.*—Patent dated February 14, 1860.—Between the partition K and the perforated partition or disk I is a common chamber L into which the syrup flows through the valves M, the syrup being discharged from said chamber through the tube C. The several valves M are inserted into valve seats made in the disk I, the number corresponding to the number of small tubes.

Claim.—The arrangement of the several syrup and water tubes provided with valves, as shown, in combination with the common discharge chamber L and tube C, substantially as set forth, for the purposes described.

No. 27,113.—JOHN DAVIS and STURGIS CHADDOCK, of Boston, Mass.—*Improvement in Gas Retorts.*—Patent dated February 14, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We claim, first, the movable flues B constructed and applied as described, in connection with the door C and its flue or projection D, and the collar of the retort, substantially in the manner and for the purpose as described.

Second. We claim the peculiar construction of the door C, with its projection or flue D, in connection with the collar of the retort and the movable flues B, the whole being applied to the interior of the retort, and operating together substantially in manner and for the purpose as set forth.

Third. We claim the combination of the safety valve with the flue D of the door C, in manner and for the purpose as specified.

No. 27,114.—LOUIS DE MASURE, of New York, N. Y.—*Improvement in Safety Studs.*—Patent dated February 14, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim, first, the movable plate *h*, which, after the stud is placed within the button hole, is capable of advancing towards or receding from the front or top plate *c*, guided by the circular rods *ff*, by means of a turning or revolving plate *c*.

Second. I claim the plate *g*, provided with circular rods *ff*, and fitting loosely upon the screw stem *e*.

Third. I claim securing the pointed pins *ii* into the plate *g*, (a plate separate from the front or top plate *c*,) so as to cause them to enter the cloth in the operation of securing the stud to the same.

No. 27,115.—B. WELLS DUNKLEE, of Boston, Mass.—*Improvement in Cooking Utensils.*—Patent dated February 14, 1860.—The object of this invention is to produce an apparatus which shall carry away the steam and disagreeable odors rising more or less in all cooking operations.

Claim.—The cover as constructed with an outer casing A, and with an inner casing B attached thereto, substantially, and for the purpose, as specified.

No. 27,116.—LEOPOLD EIDLITZ, of New York, N. Y.—*Improvement in Photographic Bank Notes.*—Patent dated February 14, 1860.—The claim explains the nature of this invention.

Claim.—The use of the photographic process, as a substitute, either wholly or in part, for engraving or printing bank notes, or other instruments requiring security against counterfeiting, in combination with the employment of paper bearing either a pressed mark or a water mark, produced as described, or by any similar means.

No. 27,117.—JOSIAH S. ELLIOTT, of West Needham, Mass.—*Improvement in Brick Presses.*—Patent dated February 14, 1860.—This invention relates to an improvement in brick presses for forming bricks from sand and lime, or other suitable material.

The inventor says: I claim, first, the carrier O, operated substantially as described.

Second. I claim clutching the cam D to the wheel G, in the manner substantially as shown, for the purpose specified.

No. 27,118.—E. P. FARRAR, of New York, N. Y., and J. N. FARRAR, of Pepperell, Mass.—*Improvement in Water Meters*.—Patent dated February 14, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim*, first, in combination with a mouth piece constructed as described, the arrangement of any suitable number of radial and inclined tubes applied to said piece in such a way that each will eject its equal share of water; this we claim in combination with the box H, deflecting plates *r*, one over each tube, and secondary box M; all arranged substantially in the manner and for the purposes set forth.

Second. We claim, in combination with the air-tight casing and tilting or measuring vessel, or its equivalent, the secondary receptacle M, communicating with the top of case N¹, and arranged in connection with the inlet pipe G, substantially in the manner and for the purposes described.

No. 27,119.—LUCIUS N. FAY and WILLIAM MASON, of Warren, Mass.—*Improvement in Blind Operators*.—Patent dated February 14, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: We *claim*, first, the combination of the screw shaft *b*, rack *e*, pinion *g*, and slotted arm *h*, applied to the window casing and blind, substantially as and for the purpose set forth.

Second. The shaft *k* having the spiral spring *l* placed on it, and provided with a bent arm O, and projection *j*, the latter being fitted in the slotted arm *h*, in connection with the hooked plate *q*, the above parts being used with or without the slide bolt *t*, substantially as and for the purpose specified.

No. 27,120.—PETER FLICKENGER, of Hanover, Pa.—*Improvement in Harvesters*.—Patent dated February 14, 1860.—This invention consists in having the tongue of the harvester passing through the draught frame, and secured by a washer in the rear of the tongue, which has a curved face fitting into a bed formed in the rear cross piece for its reception, the said piece being cut away on both sides around the opening, so as to leave the tongue free to conform to the vertical movement of its front extremity without bending.

Claim.—The tongue T, constructed with the shoulders *c c*, and ballwasher B, on the rear extremity, in combination with the front and rear cross beams of the frame, having the openings O in the one, and slot S in the other, substantially as and for the purpose set forth.

No. 27,121.—JAMES M. FREEMAN, of Belleville, N. Y.—*Improvement in Carriage Tops*.—Patent dated February 14, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arm A with its button D, or its equivalent, which will allow the carriage top to be raised or lowered without buttoning or unbuttoning or injuring the curtains to the top, and allow at the same time the top to be extended forward so as more completely to protect the person from storms and inclement weather.

No. 27,122.—AARON W. GEAHEART, of Beallsville, Ohio.—*Improvement in Bee Hives*.—Patent dated February 14, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the strips *a b* and *c*, so as to produce a galvanic current between the hive and its platform, or other support, in the manner and for the purpose specified.

No. 27,123.—W. G. GREELEY, of Hingham, Mass.—*Improved Machine for Cutting Out the Uppers and Soles of Boots and Shoes*.—Patent dated February 14, 1860.—This invention consists in the use of a reversible block or cutter holder, in connection with a movable bed piece fitted within a suitable framing, whereby the uppers and soles of boots and shoes may be cut from the leather or stock.

Claim.—The reversible block or cutter holder *n*, attached to an adjustable handle F, and used in connection with a movable bed piece B, operated by the toggles C C, and treadle E, or their equivalents, substantially as and for the purpose set forth.

No. 27,124.—SHELDON GUTHRIE, of New Orleans, La.—*Improvement in Lamps*.—Patent dated February 14, 1860.—The claim explains the nature of this invention.

Claim.—This new and improved arrangement of tubes, or burners, and wicks for burning all kinds of common oil, grease, fluids, &c., for the purpose of producing artificial light, as substantially set forth and described, the same being applicable to tubes of any size in proportion to the degree of light desired.

No. 27,125.—J. O. HARRIS and W. F. SLEWDER, of Ottawa, Ill.—*Improvement in Cultivators*.—Patent dated February 14, 1860.—This invention relates to the manner of constructing and combining the plough stocks and the frame of the implement so that the positions of the

ploughs can be adjusted or reversed to adapt it to the cultivation of corn at different stages of its growth.

Claim.—In combination with a V shaped adjustable and reversible frame, the adjustable and hinged plough stocks B, when constructed and arranged substantially in the manner and for the purpose described.

No. 27,126.—FRANCK I. HENKELL, of New York, N. Y.—*Improved Secretary Table.*—Patent dated February 14, 1860.—This invention consists in arranging on both sides of a table hinged flaps, which are connected to a common swivel head in such a manner that they allow of being turned to a vertical or to a horizontal position; and which, when turned to a vertical position, serve to conceal the real nature of the table, and when in a horizontal position they may be used for placing such articles thereon as would be in the way when placed on top; and, also, in combining a looking glass with a table top.

The inventor says: I *claim*, first, the arrangement of the hinged flaps C, in combination with the frame A of a table, and with the swivel head D, or its equivalent, constructed and operating substantially as and for the purpose described.

Second. The combination of the hinged table top E, looking glass G, and writing desk H, with the frame A and flaps C, substantially in the manner and for the purpose specified.

No. 27,127.—GUSTAV HEYDRICH, of Philadelphia, Pa.—*Improved Fire Escape.*—Patent dated February 14, 1860.—This invention consists in the employment of a shaft and drum having bearings permanently fixed inside of the cornice of buildings, and upon which a rope or chain ladder may be wound and thus always kept free from injury when not in use, and in case of danger from fire inside of the building, easily accessible from the windows, and the rope or chain ladder unwound.

Claim.—The described apparatus for saving lives and property in cases of fire, when the same is permanently attached to the cornice of the building, and constructed and operating substantially in the manner and for the purpose set forth.

No. 27,128.—BIRDSILL HOLLY, Lockport, N. Y.—*Improvement in Pumps.*—Patent dated February 14, 1860.—This invention consists in a method of connecting the lower valve with the piston, by which the latter is made to raise the valve from its seat, and thereby effect the drainage of the cylinder when required.

Claim.—Connecting the valve H to the piston D, by means of the rod g, or its equivalent, hollow piston stem E, and regulating nut a, arranged and operating substantially in the manner and for the purpose shown and described.

No. 27,129.—WILLIAM H. HOWARD, of Philadelphia, Pa.—*Improved Machine for Serrating the Surfaces of Rollers.*—Patent dated February 14, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Serrating the surfaces of metal bars or rollers by means of a screw-cutting die J, and a milling roller K, arranged in respect to, and operating simultaneously on, the said bar, substantially as set forth.

No. 27,130.—CHARLES S. IRWIN, of Madison, Ind.—*Improvement in the Manufacture of Starch.*—Patent dated February 14, 1860.—The claim explains the nature of this invention.

The inventor says: I *claim*, first, in the manufacture of starch from maize or Indian corn, an improved method of treating the corn, preparatory to its being crushed and ground, by steeping the same in water heated to an average temperature of 160° Fahrenheit, or to any other temperature ranging between 145° and 180° Fahrenheit, said water being, as usual, changed from time to time so as to maintain the requisite temperature, and to remove the water acidulated by previous fermentation of the corn, substantially in the manner and for the purposes set forth.

Second. In the manufacture of starch from maize or Indian corn by steeping the whole and uncrushed corn in water heated to a temperature of from 70° to 180° Fahrenheit, and by then grinding it with water heated to a temperature of from 70° to 140° Fahrenheit, I *claim* the method described of effecting the separation of the starch from the gluten in a more perfect manner than this has been done heretofore, by maintaining the temperature of the starch water while in the runs, at, or heating the same previous or during the separation of the starch from the gluten to, an average temperature of 60° Fahrenheit, or to any other temperature ranging between 55° and 70° Fahrenheit, substantially in the manner and for the purposes set forth.

No. 27,131.—GEORGE W. JENNINGS, of Boston, Mass.—*Improved Laundry and Taylor's Press.*—Patent dated February 14, 1860.—This invention consists in arranging a horizontally movable iron, with a vertically moving table, to bring the work up to it so as to give perfect command over both, with a powerful pressure.

Claim.—The combination and arrangement of the movable table or arm and the levers or toggle joint for operating the same, to bring the work up to the movable or revolving iron, when constructed and operating in the manner and for the purposes as set forth and described.

No. 27,132.—GEORGE JUENGST, of New York, N. Y.—*Improvement in Sewing Machines.*—Patent dated February 14, 1860.—This invention consists of a novel method of driving a needle by a crank motion, which causes its movement to be accelerated and retarded at different stages, in the manner best adapted for the formation of the loops in its thread, and the production of perfect sewing. It also consists in a certain construction of the shuttle-driver, and in certain contrivances in combination with which it operates.

The inventor says: I *claim*, first, the combination of the rotating shafts F K, one of them carrying a revolving arm J, and the other two revolving cranks G H, when the said shafts, arm, and cranks are arranged and operated as shown and described.

Second. The shuttle driver, with its jointed horn *j*, ear *r*, and spring *p*, applied and operating in combination with the guide *m n¹ o*, on one side of the shuttle race, and operating substantially as described.

No. 27,133.—EMIL KELLERMANN, of Moosop, Conn.—*Improvement in the Manufacture of Tufted Work.*—Patent dated February 14, 1860.—By this invention the threads to be worked in the moulds are dressed in a common dressing frame in the same manner as common warps. They are passed through the loop H of the wire rope I, and the crank is set in motion. When the figures C C are filled, the iron rod D is removed, and the whole set of moulds are cut by two and two, or by pairs, and cemented on each side. When dry, these are cut apart.

Claim.—The employment of a series of metallic plates A, when arranged, combined, and operating in the production of tufted work, as shown and described.

No. 27,134.—J. M. KENDALL, of South Hardwick, Vt.—*Improved Feed Motion for Boring or Mortising Machines.*—Patent dated February 14, 1860.—This invention relates to an improved machine, designed for mortising large timber for framing, and where an auger is required, in connection with a chisel, in order to form the mortises.

Claim.—The pawl Q, attached to the frame A, engaging with the rack *e*, and operated by the cross-bar *f* of the sash or gate I, for the purpose specified.

No. 27,135.—CHARLES KINZLER and WILHELM ROSEBUCK, of New York, N. Y.—*Improved Sugar Cutter.*—Patent dated February 14, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of two plates, provided with knives forming square openings, and capable of moving towards and from each other, for the purpose of cutting or cracking the slabs of sugar into regular morsels, in combination with fixed frames provided with points which enter the openings in said plates, when the latter are receding, for the purpose of pushing the morsels or pieces, which may adhere to the knives, out of the holes, and operating together in the manner and for the purpose substantially as described and specified.

No. 27,136.—THOMAS LOVELIDGE, of Philadelphia, Penn.—*Improvement in Looms.*—Patent dated February 14, 1860.—This invention consists of an escapement or pallet wheel, secured to the warp beam, a weighted pallet lever, an arm, and a catch, in combination with two stationery rollers, and a movable weighted bar, the whole being arranged for joint action so as to let off the requisite amount of work from the beam, and at the same time maintain it at a uniform tension.

Claim.—The escapement or pallet wheel H, on the end of the warp beam, the weighted pallet lever I, the arm J, and catch *f*, in combination with the rollers *n* and *n¹*, and the weighted bar *m* or its equivalents, the whole of the parts being arranged for joint action, as and for the purpose set forth.

No. 27,137.—DANIEL LOVEJOY, of Lowell, Mass.—*Improvement in Spring Skates.*—Patent dated February 14, 1860.—This invention consists in providing joints at the heel and toe of the runner of the skate, which joints form a connection between the runner and the springs, the springs being fastened to the wood or stock of the skate.

Claim.—The combination of the runner C, the joints D and D¹ at the heel and toe thereof, and the springs E and E¹, which connect said joints and runner with the stock of the skate, for the purpose and substantially as described.

No. 27,138.—JOHN W. MACKENZIE, of San Francisco, Cal.—*Improved Apparatus for Freeing Ships' Holds from Water.*—Patent dated February 14, 1860.—This invention consists in constructing the ship with a series of valved chambers at her stern, bow, and sides, and in communication with a ship's hold and certain discharge passages, so that when the

ship pitches fore-and-aft, or rolls heavily, any water, which flows into her hold by reason of leaks shall be automatically raised therefrom and discharged into the sea.

Claim.—The arrangement of compartments $a^1 a^2 a^3 a^4 a^5$ and valves ff^1 , &c., in relation to and in communication with a ship's hold A, and discharge passages c, constructed as and for the purposes described.

No. 27,139.—J. P. MANTON and H. A. BILLINGS, of Providence, R. I.—*Improvement in Hanging Rudders.*—Patent dated February 14, 1860.—The object of this invention is to hang the rudder in such a manner that it will work with but little friction, and still be properly supported and firmly secured to the vessel.

Claim.—The combination, with the rudder head C and hull A, of the plates D E, when the latter are flanged, as shown, to prevent surging, and provided with grooves $f g$, with friction balls h interposed, as and for the purposes set forth and described.

No. 27,140.—H. MARANVILLE, of Clinton, Ohio.—*Improvement in Coin Detectors.*—Patent dated February 14, 1860.—This invention is intended to test the weight and dimensions of gold and silver coin, and consists in combining a slide, marked with suitable scales, with a plate which is furnished with two knife edges on its under side, and with two projections above in such a manner that the standard weight of a certain coin, placed against the two projections on the upper side of the plate, turns the same on the above-named edges, and raises the slide, when the latter is drawn out to a certain point which is marked to correspond with the coin in question.

Claim.—The arrangement of the plate A, with diameter scale c, and incisions $d d^1$, and with knife edges b , in combination with the slide B marked on one side for gold, and on the other side for silver coins as described, and operating in the manner and for the purpose specified.

No. 27,141.—CHARLES McCAMMON, of Albany, N. Y.—*Improvement in Constructing Bars of Cast or Wrought Iron.*—Patent dated February 14, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combining of wrought iron with cast iron in the formation of bars, by the process and for the purposes set forth and described in the specification.

No. 27,142.—ISAAC M. MILLBANK, of Greenfield Hill, Conn.—*Improvement in the Apparatus for Manufacturing Oxide of Zinc.*—Patent dated February 14, 1860.—This invention is intended to include the manufacturing of any volatile metal for which it may be found applicable.

Claim.—The combination and arrangement of the furnace A with metal top, accessible openings d and e , and the flues $b b$ in connection with the perforated pipes $c c$, the chute f , the receptacle j , the duct B B with its reticulated surface K, the collecting or saving apparatus with the apartment C, to be managed and used as described in the specification.

No. 27,143.—WILLIAM MOSHER, ISAAC H. MOSHER, and JOHN J. HARRIS, of Green, N. Y.—*Improvement in Machines for Bending Tire.*—Patent dated February 14, 1860.—This invention consists in the use of a wedge or tapering key to control the length of the lever that holds a roller to press upon the bar adjusting it to the necessary thickness, and the scroll-shaped former to hold the bar so that the roller will pass over the lap and complete the bending at one operation.

Claim.—The scroll-shaped stationary former, the mode of holding the end of the bar to be bent, the manner of adjusting the friction roller by the wedge-shaped key through the lever bearing against the centre bolt, all in combination as specified, and for the purposes set forth.

No. 27,144.—THOMAS MURPHY, of Cincinnati, Ohio.—*Improvement in Cultivators.*—Patent dated February 14, 1860.—A is the beam provided with a clevis B, by which it is drawn. It is mortised to the standard C, and both have connection with the bracing standard D, to which the handles E are connected. F is a common shovel plough share connected to the standard C and braced to the beam A by G. H H¹ are staples through which the adjusting rods of the mould boards and cultivator frames respectively pass for fastening.

Claim.—The described arrangement of the plough frame A C D E F, detachable mould-boards K, and detachable cultivator frames N O, the whole being constructed and operating in the manner and for the several purposes set forth.

No. 27,145.—WALTER NANGEL, of Philadelphia, Pa.—*Improved Mortising Machine.*—Patent dated February 14, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The employment of rotary reciprocating cutters in mortising machines, substantially in the manner and for the purpose set forth.

No. 27,146.—CHARLES NEAMES, of New Orleans, La.—*Improvement in Bagasse Furnaces.* Patent dated February 14, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the use of chambers in wet fuel furnaces which have their receiving openings exclusively in and from the interior of the furnace, to receive the vapors arising from the fuel, and which will convey and distribute the same at points to meet the carbonaceous gases, to allow the oxygen from the vapor to be brought in contact with highly heated carbon, to support combustion.

I also claim the hollow pillars mounted on wall A, in combination with flue c, when arranged and operated as and for the purpose set forth.

No. 27,147.—EDWARD O. C. ORD, of the United States Army.—*Application of Gunpowder to Flat Projectiles, giving them Rotation.*—Patent dated February 14, 1860.—This invention consists in giving, by an explosive force, an impulse to oblate or flat projectiles, and thereby communicating a motion of translation and one of rotation in, and parallel to, the planes of greatest oblateness of the projectiles.

Claim.—The use and control of flat projectiles discharged from fire arms, or not by hand, and rotating in their flight, substantially as described.

No. 27,148.—JOSEPHUS PARSONS, of Carthage, Ohio.—*Improved Rotary Steam Engine.*—Patent dated February 14, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The construction and arrangement of the wheel B, provided with radial shuttle valves D, and the steam chambers, the said valves and the wheel itself being operated by steam, in combination with the cams, which also serve as stationary pistons, substantially as set forth, for the purposes described.

No. 27,149.—W. A. PATRICK, of Ludlow, Vt.—*Improved Method of Operating Feed Nuts in Lathes.*—Patent dated February 14, 1860.—This invention relates to an improved means for operating or adjusting the two parts of a divided nut, so that the same may be made to engage with or be disengaged from the feed screw, which, when the nut is engaged with it, gives the feed movement to the carriage containing the knife.

Claim.—The yoke C, connected with the hand lever E and spring F, and also connected with the sliding plates *b b* of the sections *c c* of the nut, by means of the pins and slots *e e d d*, the whole being arranged to operate as and for the purpose set forth and described.

No. 27,150.—N. A. PATTERSON, of Kingston, Tenn.—*Improvement in Harrows.*—Patent dated February 14, 1860.—This invention consists in attaching the teeth of the implement to shafts, which have a vibratory movement imparted to them as the implement is drawn along, for the purpose of relieving it from the trash, weeds, &c.

Claim.—The arrangement of the shafts or side rails D, with the mechanism for vibrating them, substantially as and for the purposes set forth and described.

No. 27,151.—EDMOND PEEK, of San Jose, Cal.—*Improvement in Harvesters.*—Patent dated February 14, 1860.—This machine is turned and guided by means of the shaft *j¹*, pinion *i¹*, and semi-circular rack *h¹*. As the driver stands on the platform *l*, the spring plates *n¹ n¹* of the lever *o¹* and the lever N are within his reach, and may be operated with facility.

Claim.—The arrangement of the vertical rod *j¹*, racks *m¹ m¹*, lever N, spring plates *n¹ n¹*, rods *o o¹*, perch J, apron box F, axle I, and clutches *j p*, as and for the purpose shown and described.

No. 27,152.—C. M. PLUMB, of North Orange, N. J.—*Improved Time Table for Railroads, &c.*—Patent dated February 14, 1860.—The object of this invention is to obtain a cheap and ready reference time table for railroad stations, for giving information to persons travelling over certain routes, and to serve as a perpetual railroad directory, showing the time of departure of the trains leaving the station during the day or night.

Claim.—The within described construction of frame and movable slides, with the separate movable plates with letters or numerals denoted thereon, the whole being combined, arranged and operating for the purposes and in the manner described.

No. 27,153.—CHARLES POPE, of Syracuse, N. Y.—*Improvement in Apparatus for Evaporating Saline Liquors.*—Patent dated February 14, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the hollow angle pieces constructed and arranged substantially as described and for the purpose set forth.

I also claim making the arms of the kettles hollow, as set forth, and for the purpose stated.

I also claim combining the hollow angle pieces with the air spaces D upon the sides of the arch, when so arranged that heated air may pass from the spaces upward through the angle pieces, and be discharged over the boiling liquid in the kettles, as set forth.

No. 27,154.—D. J. POWERS, of Madison, Wis.—*Improvement in Straw Cutters*.—Patent dated February 14, 1860.—This straw cutter has its knives arranged on a revolving cylinder so as to cut upward against a stationary revolving blade. The lower feed roller, which is fluted and made of metal, is adjustable in a curved slot, and is so arranged with four gear wheels that it is always in gear with the driving mechanism. A weighted lever holds the feed roller with a yielding pressure against the upper fluted metal feed roller on the straw passing between the two rollers.

The inventor says: I *claim*, first, the arrangement of the adjustable ledger blade I J, in combination with the upward cutting knives G of the cylinder D, curved slot R, compensation pinions Q¹ Q² Q³ Q⁴, weighted lever S, and feed roller M, substantially as and for the purposes set forth.

Second. The arrangement of the cone or gear wheels L, on the feed roller shaft, with the compound pinion C of the knife cylinder, substantially as and for the purpose, set forth.

No. 27,155.—THOMAS E. PURCHASE, of Danville, Pa.—*Improvement in Grates for Furnaces*.—Patent dated February 14, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of a series of comb like bars each interlocking the other and capable of being oscillated independently of the other, substantially as specified, for the purposes set forth.

No. 27,156.—JOSEPH REYNOLDS, of Providence, R. I.—*Improvement in Marine Propellers*.—Patent dated February 14, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The double cranks supported by outside bearings, with the propeller frames supported by stay rods and guided at the top with two radius rods to each frame hung to the vessel, or suitable frames attached to the vessel abaft the main shaft to which the propeller frame is connected, the radius rods to be of a suitable length and hung in a proper position to hold or guide the top of the frame forward, or beyond the shaft to which it is attached, the whole constructed and arranged substantially as and for the purposes specified.

No. 27,157.—AARON RING, of Westbrook, Me.—*Improvement in Seeding Machines*.—Patent dated February 14, 1860.—This improvement is explained by the claim and engravings.

Claim.—The combination of the wheel A, which is open at both ends, with wheel B, both wheels placed upon the same axis and rotating in opposite directions in combination with two shafts C and D, one within the other, substantially as and for the purpose set forth.

No. 27,158.—WILLIAM ROBOTHAM, of Newark, N. J.—*Improved Gag Runner*.—Patent dated February 14, 1860.—The object of this invention is to give strength to a part hitherto weak, and in so placing the loop as to add to the beauty of the attachment.

Claim.—Constructing the two loops in one piece and arranging them substantially as described.

No. 27,159.—FISK RUSSELL, of Manchester, N. H.—*Improvement in Mowing Machine Cutters*.—Patent dated February 14, 1860.—This invention is to so form the cutters that there cannot be any loose grass drawn under them, or between them and the guard fingers, to clog or in any way retard their motion.

Claim.—The combination of the wings or projections C, with the blades A, when the latter are pivoted and when the said projections are arranged to operate in connection with the guards as and for the purpose set forth.

No. 27,160.—THOMAS SAULT, of Seymour, Conn.—*Improvement in Rollers for Making Caoutchouc and Allied Gums*.—Patent dated February 14, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The breaking down, comminuting, and cleaning of crude commercial vulcanizable gums, separating them from foreign bodies by toothed rollers, substantially as set forth, whether the rollers be in pairs or in threes or any other number.

No. 27,161.—WILLIAM M. SLOANE, of Buffalo, N. Y.—*Improved Machine for Dressing Staves*.—Patent dated February 14, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the feed roller N, having the gauge n, in combination with the cutters J J, when the said feed roller is so placed and arranged with reference to the cutters and other parts of the machine as that the stave will be fed to the cutters, in such relative time and motion, as to cause the middle of the stave to be dressed while the cutters are in their lowest position, substantially as herein described.

Second. I claim the combination and arrangement of the gauge n, with a pressure or feed roller N, whose circumference is equal to or greater than the length of the longest stave to be dressed, the said gauge being adjustable on the face of the roller so as to cause the middle of a long or short stave to be dressed by the cutters while in their lowest position, substantially as set forth.

Third. I claim the relative arrangement of the annular rim or feed bed B, friction rollers E E¹ and E², and the pressure rollers T and T¹, for the purpose set forth.

Fourth. I claim the combination of the rotating bed, having a roughened surface, with the pressure rollers T and T¹, for the purpose and substantially as described.

No. 27,162.—JONATHAN SMITH, of Tiffin, Ohio.—*Improvement in Seed Drills*.—Patent dated February 14, 1860.—In this invention while the corrugated wheels, which are so arranged as to give a zigzag motion to the grain or seed, the ratchet formed edge of the washers has the tendency to force the grain downwards, at the same time facilitating the zigzag movement given by the corrugated wheels to force the grain through the discharge holes.

Claim.—The thin metal corrugated wheels D, and ratchet washers E, conforming therewith in lateral surfaces, in combination with shaft A, collars F, and concave hopper bottom B, the operation being as set forth.

No. 27,163.—WILLIAM W. SPAFFORD, of Petersborough, N. H.—*Improvement in Railroad Car Wheels*.—Patent dated February 14, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The construction of the car wheel formed with curved or corrugated shell side surfaces c c d d, and internal diaphragms or partition f f f f, forming one or more internal cells, cavities, chambers, or spaces g g h h, when said surfaces and diaphragms are so arranged as that the incumbent downward weight or pressure acting thereon shall be in a direction vertically throughout said parts of the wheel, substantially as set forth and described.

No. 27,164.—OTIS W. STAMFORD, of Cincinnati, Ohio.—*Improvement in Grinding Mills*.—Patent dated February 14, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of grinding surfaces composed of spiral ridges, separated by cavities which shoal or feather diagonally, as set forth.

No. 27,165.—DANIEL D. STELLE, of New Brunswick, N. J.—*Improved Acoustic Apparatus*.—Patent dated February 14, 1860.—The engraving represents the funnel shaped receiver a a, which collects the sound, of an elliptical form at its mouth which fits an opening in the top of the pulpit B, and gradually assuming a circular form toward the bottom, where it terminates in a circular throat b, from which a pipe c runs under the floor A to the point d, where it is led upward through the floor to connect with a taper flexible tube e, at the end of which is a suitable ear piece g to be placed in the ear of the person requiring it to conduct the sound thereto.

Claim.—The combination with a pulpit or reading table, of the sound receiver a a, and conducting tube c, substantially as and for the purpose shown and described.

No. 27,166.—GEORGE K. SNOW, of Watertown, Mass.—*Improvement in Folding Paper for Book Binders*.—Patent dated February 14, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* folding each sheet with back folds and into two connected signatures having their connection along or adjacent to and between the front edges to be trimmed, and so that the said connection may be trimmed or separated with such front edges from the rest of the paper while they are trimmed; my process involving the back folding of the sheet one or more times in making the first folding, and the back folding of it twice or other suitable greater number of times in making the second folding, or that which is at right angles to the first folding.

No. 27,167.—JOSEPH STORM, of Woonsocket, R. I.—*Improvement in Paper Rag Engines*.—Patent dated February 14, 1860.—This invention relates to improvements in that class of rag

engines in which a rotary drum is employed to keep up a constant supply of rags to a revolving cutter cylinder operating against stationary knives, and consists in the employment of a conductor attached to the stationary knives for the purpose of regulating the supply of rags to the cutters.

Claim.—The employment of the conductor H, in combination with the rotary drum B, the rotary cutter cylinder D, and the stationary knives F, arranged substantially as and for the purpose specified.

No. 27,168.—NOAH SUTTON, of New York, N. Y.—*Improvement in Slide Valves.*—Patent dated February 14, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the two pistons E E¹, and cylinders C C¹, between the two heads of the double D-valve, or what is equivalent, between two short connected D-valves, with a single steam passage in each of said cylinders, and an exhaust passage common to both of said cylinders communicating through the partition between the said cylinders with the main exhaust passage, substantially as described.

No. 27,169.—WILLIAM SWIFT, of Brooklyn, N. Y.—*Improved Invalid's Bedstead.*—Patent dated February 14, 1860.—On the top of the jointed mattress frame B rests a secondary frame D, which has attached to it strips *b* of suitable material extending across said frame, and placed at suitable distances apart. These strips are buttoned or looped to the side bars of the frame D in such a way that they may be readily attached or detached if found necessary.

The inventor says: I *claim*, first, the combination of movable frame D with mattress frame B, jointed pieces G, and weights F, all arranged and operating in the manner and for the purposes set forth.

Second. The frame B, when the same is pivoted to the head and foot rails, as and for the purposes described.

No. 27,170.—H. K. SYMMES, of Newton, Mass.—*Improvement in the Mode of Extinguishing Gas Lights.*—Patent dated February 14, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The extinguishing of gas lights by means of an inverted cup B, or its equivalent, expanding chamber provided with an inlet valve *a b* so applied, substantially as herein described, in combination with the burner or supply pipe, that though it will be caused to effect the shutting off of the gas, by a temporary increase or diminution of pressure, it will not permit the renewal of the supply to the burners to be effected by a subsequent diminution or increase of the pressure.

No. 27,171.—B. T. TRIMMER, of Rochester, N. Y.—*Improvement in Grain Separators.*—Patent dated February 14, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* inducting the grain to the screens *f m*, through the concentrated currents of two blasts by the small throats *a c* of division G, and *d* of division H, the blast through A, having an upward or convex, and that through *c*, a concave direction to the falling grain, substantially in the manner and for the purposes described.

I also claim the combination and arrangement of the perforated sheet metal screens having a section of larger orifices *f*, in communication with division G, and of smaller orifices *m*, with divisions H, of the chamber of separation above, substantially as and for the purposes described.

I further claim the arrangement and combination of the opposing segmental arms L, crank *o*, and spindles S S, with the screen box E, for giving the desired direction to the vibrations of the screens, and regulating the same substantially as set forth.

No. 27,172.—FRANCIS VAN DOREN, of Adrian, Mich.—*Improvement in Hand Seed Planters.*—Patent dated February 14, 1860.—The secondary hopper at the back of the seed box enables the operator, who carries the planter in his hand, to see whether seed is brought down from the seed box every time the planter is operated at a new hill.

The inventor says: I *claim*, first, the arrangement of a secondary hopper A at the front side and near the bottom of the planter for the seed which is brought from the main hopper by a roller connected to the plunger to fall into and thus be in sight of the operator until it is forced in the ground, substantially as and for the purposes set forth.

Second. The arrangement H *i j* for operating the device G, which scrapes the dirt off the discharge end of the planter, substantially as and for the purposes set forth.

No. 27,173.—E. L. VERTREES, of Howe's Valley, Ky.—*Improved Mode of Cutting Boot Vamps.*—Patent dated February 14, 1860.—This invention consists in cutting from the side of the foot and ankle, in lieu of the triangular opening, an opening pointed at each extremity, commencing with a point near the lower edge and extending upward to a point in or

near the ankle, and in drawing together the sides of this opening, so as to contract the leg at the ankle, and by the use of a single seam to produce a form of boot identical with that in general use.

Claim.—In combination with cutting a boot vamp without crimping, removing the pointed portion of the material M X N Y in the side of the ankle, and joining the edges so as to contract the back at O and incline the leg forward, substantially as, and so as to obtain the advantages, set forth.

No. 27,174.—JOSEPH VOWLES, of New Hudson, Mich.—*Improvement in Cultivators.*—Patent dated February 14, 1860.—This invention relates to a machine which can be used for cultivating the soil as well as for hoeing corn or any other plants set out in rows, the machine being made applicable for either purpose, and widened out, narrowed, raised, or lowered, and made to throw the soil from or to the plants in measures or regulated quantities, as may be desired.

The inventor says: I *claim*, in combination with the series of hoes or ploughs L L, the pair of front hoes or ploughs N N, constructed, arranged, and made adjustable in the manner and for the purposes herein described and represented.

I also claim the peculiar construction, combination, and arrangement of the frame, the pulleys, and the locking of the standards to the frame, substantially as described and for the purposes set forth.

No. 27,175.—EDWIN WARD, of New York, N. Y.—*Improved Churn.*—Patent dated February 14, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The churn made up of a horizontal cylinder having ribs, as described, and an interior shaft armed with dashers, the cylinder being made to rotate in the one direction and the shaft and dashers in the opposite direction, as set forth.

No. 27,176.—EDWARD WEBSTER, of Hartford, Conn.—*Improvement in Gridirons.*—Patent dated February 14, 1860.—This invention consists of a revolving gridiron or meat broiler, in combination with a frame to fit the opening of a stove, or elsewhere.

Claim.—The folding and revolving broiler, in the manner as described, in combination with the frame and cover, substantially as described and for the purpose set forth.

No. 27,177.—W. R. WEBSTER, of Gowanda, N. Y.—*Improvement in Tanning.*—Patent dated February 14, 1860.—This invention consists of a solution of chloride of lime in which the hides are saturated, after the removal of the hair by the ordinary process, and the hides pass through the bait, and afterwards in a combining solution of the chloride of lime with the materials used in tanning. The tanning liquor is made of one hundred gallons of water, three pounds of chloride of lime, thirty pounds of gambier or catechu, six pounds of alum, and three pounds of salt.

Claim.—The use of chloride of lime in combination with the materials specified, or with any materials used in the ordinary process of tanning.

No. 27,178.—DECATUR WERST and AARON PUDERBAUGH, of Waltz Township, Ind.—*Improvement in Lathes for Turning Irregular Forms.*—Patent dated February 14, 1860.—This invention consists in the combination of the vertically reciprocating cutter, with the longitudinally travelling carriage and the laterally sliding gauge. The cutter is guided by a pattern, which revolves with the article operated upon.

Claim.—The combination of the vertically reciprocating cutters c with the longitudinally travelling carriage B and laterally sliding gauge E, by the means and in the manner substantially as described, for the purpose set forth.

No. 27,179.—CALVIN D. WHEELER, of New York, N. Y.—*Improvement in making Gauges for Sewing Machines.*—Patent dated February 14, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Combining with a sliding rule, arranged as described, the spring point for the purpose of measuring and marking material for folding, to facilitate the operation of guiding said folds through a sewing machine for the successive stitches, as set forth and specified.

No. 27,180.—STEPHEN WILCOX, JR., of Westerly, R. I.—*Improvement in Hot Air Engines.*—Patent dated February 14, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the dividing of the changing piston into two parts 1 2, and conducting the air through the space between them in its transfer from the cold to the hot end of the cylinder, substantially as and for the purpose set forth.

Second. Dividing the bearing X, or its equivalent, from the heated portion of the working

piston by the space Q, which space is in free communication with the external atmosphere, so that the heat is conveyed away by connection, substantially in the manner set forth.

Third. The arrangement of the exhaust valve T, hollow piston rod 3 and 4, and guide case 6, or their respective equivalents, for the purposes set forth.

Fourth. The combination and arrangement of the crank C Z, adjustable eccentric Y, and eccentric rod and connections, or their respective equivalents, for the purpose of working a valve, the seat of which is carried in or with the piston, substantially as set forth.

No. 27,181.—ABNER WILLSON, of Colden, N. Y.—*Improved Churn*.—Patent dated February 14, 1860.—A is the vessel for the cream; B the dasher; C the crank shaft; D the screw whirl; E the cord which passes over the screw whirl and operates it. This cord is attached either to the bow F or the treadles G; *a a* are the springs on the bow for keeping the cord properly tightened.

Claim.—The bow F, with springs *a*, when constructed as described, in combination with screw whirl D, operating as set forth and for the purposes described.

No. 27,182.—AUGUST WALZE, of St. Louis, Mo.—*Improvement in Smut Mills*.—Patent dated February 14, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Arranging and operating the cylinder D and beater B, with respect to each other as and in the manner described, not *per se*, but when the said cylinder is made with the opening S in one end (as at Fig. 5), and with its surface perforated with a flat punch upon diagonal lines, and when the said beater is made with the blades set diagonally across its axis in the manner described for the purpose specified.

No. 27,183.—CHARLES J. APPLETON, of Philadelphia, Pa., assignor to B. H. HOWELL, of New York city, and JOHN COTTON, of said Philadelphia.—*Improvement in Knitting Machines*.—Patent dated February 14, 1860.—This invention relates to an improvement in machines for knitting circular fabrics, and it consists in a system of hinged needles and sinkers combined with a thread guide, a wheel with a serrated edge, and a cam, or their equivalents, arranged and operated so as to produce a circular knitted fabric.

Claim.—The system of hinged needles and sinkers, in combination with the thread guide J, and the cam K, and serrated wheel I, or their equivalents, the whole being arranged and operating substantially as set forth.

No. 27,184.—GOTLIEB M. BARTH, of Philadelphia, Pa., assignor to himself and D. D. JONES, of said Philadelphia.—*Improvement in Weighing Carts*.—Patent dated February 14, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, connecting the frame D, with its bars H and H¹, to the axle A, so as to be confined laterally and longitudinally to the said axle, and so that it may be elevated above the same, either perpendicularly or on one side more than the other, as and for the purpose set forth.

Second. The shaft E, with its projections or cams *i i*, and the projections *j j*, on the axle A, in combination with the frame D, the bars H and H¹, with sharp edged projections *n n*, and the body X of the cart, the whole being so arranged that, on turning the said shaft in one direction, the body of the cart will be supported solely by and on the said sharp edged projections, and on turning the shaft in a contrary direction, the body of the cart will be supported on the axles and the bars H and H¹, on the shaft E, as specified.

Third. The graduated lever M, connected with the bars H and H¹, by the arms J and K, and link *q*, in combination with the plate N, the latter being jointed to, and rendered adjustable on, one of the shafts C, and the whole being arranged substantially in the manner set forth.

Fourth. The shaft E, with its projections *w w*, in combination with the plates *u u*, on the underside of the body X, the whole being arranged as set forth for the purpose of retaining and releasing the said body.

No. 27,185.—ABNER BURBANK, of Brooklyn, N. Y., assignor to GEORGE W. BURBANK, of Rochester, N. Y.—*Improvement in Soldering Irons*.—Patent dated February 14, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination of the soldering tool or iron with any suitable gas supply, when the arrangement is such that the soldering tool may be constantly supplied with gas, and the "copper" maintained in a heated state while the tool is used by the workman, substantially as shown and described.

Second. I claim the combination of a gas light with a soldering tool or iron to illuminate the interior and other parts of the work to which the tool may be applied, substantially as shown and described.

Third. The employment of a chamber *a*, in the base of the copper A, as and for the purposes shown and described.

Fourth. The employment of a tubular screw B, in combination with the copper A, and cylinder C, as and for the purposes shown and described.

No. 27,186.—THOMAS B. DE FOREST, of New York, N. Y., assignor to himself and WALLACE & SONS, of Ansonia, Conn.—*Improvement in Lanterns*.—Patent dated February 14, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* forming, out of a vertical piece of wire, two of the vertical guard wires, substantially as set forth.

I also claim bending the double guard piece of wire *a*, into such shape as to form the connecting link for the attachment of the handle as specified.

I also claim forming the support for the protector C, out of one of the double guard wires, as shown and described, in combination with the retaining portion of the other extended wire, as set forth.

I also claim the peculiar construction of the handle D, as specified, for the purpose set forth.

No. 27,187.—JOHN R. HENSHAW, of Middletown, Conn., assignor to himself and SAMUEL BABCOCK.—*Improvement in Skates*.—Patent dated February 14, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The plate *k*, made so as to be adjusted on the bars *f*, or its equivalent, and the thumb screw *h*, as means for securing the heel of the boot or shoe to the skate, as set forth.

No. 27,188.—WILLIAM H. JOHNSON, of Richmond, Ark., assignor to himself and J. D. BELLAH, of said Richmond.—*Improvement in Ploughs*.—Patent dated February 14, 1860.—The beam A is constructed of a draught block *a*, and a strip of iron *b* bent into a U form, the ends thereof lapping over the rear end of the block *a* notched to receive them. The two parts are united by the bolts *c c*.

The inventor says: I *claim* constructing the beam of the draught block *a*, and bent strip of iron *b*, arranged and combined as specified.

I also claim the ring D, in combination with the beam A, and share standard E, constructed, arranged, and operating substantially as specified.

No. 27,189.—JOSEPH LAMB, of New York, N. Y., assignor to himself and RICHARD LAMB, of said New York.—*Improvement in Portable Sleds*.—Patent dated February 14, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, a folding sled as a new article of manufacture, the parts being hinged together and capable of being instantly expanded into a rigid sled, or folded in a small compass, as set forth.

Second. I claim, in a folding sled, the described combination and arrangement of the grooved braces B, cross braces C, and runners R, whereby the sled, when folded, occupies a thickness equal only to that of the braces, B or C, themselves.

Third. I claim, in connection with the last, the described arrangement of the back frame A, by which it is folded into the plane of the braces B C, and runners R.

Fourth. I claim, in a folding sled constructed substantially as described the employment of the flexible or hinged foot rest E, so arranged and suspended as to secure the advantages set forth.

No. 27,190.—WILLIAM H. LAUBACH, of Philadelphia, Pa., assignor to himself and D. C. ENOS, of said Philadelphia.—*Improvement in use of Hydro-Carbon Vapor for Illumination*.—Patent dated February 14, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Forcing into and through the distributing pipes hydro-carbon vapor, at such a high temperature that no condensation of the vapor can take place in the said pipes, when the latter are so arranged that no closing of the burners can obstruct the free circulation of the heated vapor throughout every portion of the said distributing pipes, as and for the purpose set forth.

No. 27,191.—ISAAC P. LYKENS, of Pottsville, Pa., assignor to himself and WILLIAM BICKEL, of said Pottsville.—*Improvement in Machinery for Breaking Coal*.—Patent dated February 14, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the reciprocating spiked plates I, and the spiked bars N, in combination with the chutes Q, and their movable doors *q*, the whole being arranged and operating substantially as set forth.

Second. Attaching both the upper and lower spikes, independently of each other, to the bars in such a manner that the position of the said spikes may be altered at pleasure, the bars themselves being likewise so secured as to admit of ready adjustment, in the manner and for the purpose specified.

Third. The springs M, arranged in respect to the spiked plate I, and the spiked bars N, as and for the purpose set forth.

No. 27,192.—DANIEL NICHOLSON, of Lockport, N. Y., assignor to himself and CHARLES R. Fox, of said Lockport.—*Improved Method of Feeding the Bolt to the Knife in Shingle Machines.*—Patent dated February 14, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, constructing the racks R R, of two toothed longitudinal parts *v w*, so arranged as to be capable of adjustment one with the other, for the purpose of varying the taper of the shingles and sawing "stuff" of equal thickness throughout when desired.

Second. The arrangement of the racks R R, slides S T, connected by the lever U, and the slotted slides M N, operated by the lever O, and crank *g*¹, and fitted in the bar L, substantially as shown, for the purpose of actuating the racks R R.

No. 27,193.—ENOS B. PHILLIPS, of Cambridgeport, Mass., assignor to himself and CHARLES W. PHILLIPS, of said Cambridgeport.—*Improvement in the Manufacture of Skates.*—Patent dated February 14, 1860.—The runner A and the plate or top B of the skate on which the ball of the foot of the wearer rests, and also the heel plate C, are cast in one piece; the plate B and heel C being connected by a piece *a*, both being supported by the standards *b* rising from the runner.

The following composes the material of which the skate is cast: eight pounds of copper, one and a quarter pounds of tin, one and one-sixteenth pound of zinc, and one ounce of antimony.

Claim.—As a new article of manufacture, a skate cast from the described composition metal, substantially as set forth.

No. 27,194.—JAMES SPEAR, of Philadelphia, assignor to himself and D. C. ENOS, of said Philadelphia.—*Improved Post Office Stamp.*—Patent dated February 14, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, constructing a stamp or die with letters, the outline of which is composed of fine points, constructed in the manner and for the purpose described.

Second. I claim stamping letters so that the letter, as well as the envelope, will bear the post office mark in a distinct manner, as described.

No. 27,195.—ROBERT ANDERSON, of Brooklyn, N. Y.—*Improvement in Machines for Hulling and Finishing Rice.*—Patent dated February 21, 1860.—The inventor says: My invention relates to the finishing of rice after the operation of hulling, and for this purpose I apply a rubbing operation that removes the refuse skin between the hull and rice. To perform this rubbing operation, I make use of a series of revolving beaters, or stirrers of alum dressed hide.

Claim.—A series of revolving beaters of alum dressed hide, acting to finish the rice, substantially in the manner specified.

No. 27,196.—S. R. ATKINS and J. R. HITCHCOCK, of Plantsville, Conn., assignors to J. R. HITCHCOCK, aforesaid.—*Improved Sausage Filler.*—Patent dated February 21, 1860.—This improvement consists in having a spring slide cut-off arranged over the nozzle, and nearly in line with the centre of the cylindrical case, so that as the meat is fed into the machine through the hopper the presser carries it around and presses it into the nozzle, and the spring cut-off working against the face of the presser cuts off the meat from travelling in a continuous and circuitous direction with the presser, which is forced by the action of the presser through the nozzle.

Claim.—A revolving presser *d*, within the case *a*, with the cut-off *i*, in the manner and for the purpose substantially as described.

No. 27,197.—FRANKLIN L. BAILEY, of Boston, Mass.—*Improvement in Printing Presses.*—Patent dated February 21, 1860.—This press operates as follows: A card having been placed upon the face of the platen D, against the guide *k*, motion is given to the press by crank 13, the platen is drawn upward, the nipper clasps the card in its upward motion towards the type, meanwhile the cam P receding allows the roller carriage to drop down, so that the roller F will rest against the ink cylinder just previous to the time that the platen reaches the form to take the impression. The upward movement of the platen being completed, it then falls back, the roller carriage again rises, the nipper lifts from the card, allowing it to drop, and the platen comes to a state of rest as before.

The inventor says: I *claim* giving to the vibrating platen its periods of rest and motion for the purpose described, when operated by the arms 11, 11, and shaft 1

Second. I claim the cavity *d*, and screw *b* for the purpose set forth.

Third. I claim the combination of the rack G and cam P, for the purpose set forth.

Fourth. I claim the combination of the guide k and vibrating platen D, for the purpose set forth.

No. 27,198.—EDWARD C. BETTS, of Huntsville, Ala.—*Improvement in Presses*.—Patent dated February 21, 1860.—This improvement consists in the use of rack bars, a lever provided with a movable fulcrum and pawls or hooks arranged and combined in a novel way for the purpose of giving the desired pressure; and it further consists in a peculiar arrangement of the press box in connection with the levers and rack bars aforesaid.

The inventor says: I claim, first, the combination of the rack bars F F and the lever G, when the latter is provided with the pawls I I, and the movable fulcrum rods H H, arranged to operate as and for the purpose set forth.

Second. The arrangement of the movable or sliding box B and follower rack bars F F, operated as shown, to admit of the exposure and consequent accessibility of the compressed article, for the purpose specified.

No. 27,199.—HENRY F. BOND, of Waltham, Mass.—*Improved Bread Slicer*.—Patent dated February 21, 1860.—This invention has for its object the production of a bread slicer by means of which a loaf of bread may be cut into pieces of various and uniform thicknesses, and consists in the use of a carriage on which the loaf is secured, and which is fed forward the requisite distance at each turn of the crank, and a rotary knife and eccentric gearing.

Claim.—The combination and arrangement of the eccentric gear wheels B and C, the knife G, the lever E, the carriage I, and the rack D, substantially as and for the purpose specified.

No. 27,200.—MAX BRAUN, of Brooklyn, N. Y.—*Improvement in Inkstands*.—Patent dated February 21, 1860.—This invention consists of a peculiarly constructed top for the ink cup, and the novel introduction of a small finger force pump for increasing the pressure of the air on the ink in the cup, and in this manner forcing it up into the fountain cup by supplying new air instead of densifying the air in the reservoir.

Claim.—The chamber E, with flexible perforated diaphragm e, hollow stem D, and tubes a b, combined with a fountain cup B, and arranged in the manner and operating upon the principles set forth.

No. 27,201.—HUGH B. BROWN, of Huntington, N. Y.—*Apparatus for Teaching Orthography, &c.*—Patent dated February 21, 1860.—This invention consists in the arrangement of blocks upon which letters or figures or words are printed, or otherwise represented upon axes in a frame, the arrangement being such that by turning the blocks upon their axes so as to present different faces, other words or figures or letters will be shown, and by changing the position of these blocks by rotation, various words and sentences may be expressed.

Claim.—The arrangement upon axes in a frame, as described, of a series of blocks with printed, or otherwise marked, and with blank sides, substantially as and for the purposes set forth.

No. 27,202.—WILLIAM A. CARPENTER, of Elgin, Ill.—*Improved Permutation Lock*.—Patent dated February 21, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim, first, the employment of a bolt C, which is of a form approximating to a circle, and is arranged so as to be adjusted on a solid spindle C¹, which has an index e on its front end, in combination with the face plate of a safe door or a lock which has a circle or a part of a circle of figures or characters D marked on it, substantially as and for the purposes set forth.

Second. The combination of a series of bolts C of the form stated, having index spindles d C¹ e with a series of circles or parts of circles of figures or characters D on the face of the lock or safe door, substantially as and for the purposes set forth.

Third. The combination with the bolts C, having index spindles C¹ d e, of a turning shaft H, a wedge plate I, of the same shape circumferentially, at the bolts, a series of spring catches F F, a series of short levers G G, a series of stops I¹, and a series of indented plates E E, substantially as and for the purposes set forth.

No. 27,203.—THOMAS CASTOR, of Philadelphia, Pa.—*Improvement in Passenger Railway Cars*.—Patent dated February 21, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim, first, the frame H, trussed and otherwise constructed, substantially as set forth, combined with and connected to the roof F of the car, and arranged on the same in respect to the opposite ends C and C¹ of the car, as and for the purpose set forth.

Second. I claim the detachable spiral ladder, composed of the pole I, its rounds m, and

connecting rib *n*, when the said ladder is arranged in respect to the platform B or B¹, and overhanging portions *e* or *e*¹ of the roof and connected to the same, substantially in the manner specified.

Third. I claim the guards P P, constructed and applied to the car, substantially as set forth, when the said guards are arranged to be controlled by the foot of the driver, through the medium of the vertical rods R and the levers Q Q¹, or their equivalents, as set forth, for the purpose specified.

No. 27,204.—GEORGE B. CLARKE, of Leonardsville, N. Y.—*Improvement in Ventilating Apparatus*.—Patent dated February 21, 1860.—This invention consists in combining a damper and an air valve with a twisted rod in such a manner that the expansion or contraction of the said rod, caused by the increasing or decreasing of temperature of the stovepipe, causes the damper to close or open an air valve.

Claim.—Combining with the damper *f* and an air valve *j*, or their equivalents, the slotted crossbar H, guide bracket *o*, and twisted rod or wire G, substantially in the manner and for the purposes specified.

No. 27,205.—EDWIN B. CLEMENT, of Barnet, Vt.—*Improved Churn*.—Patent dated February 21, 1860.—This invention consists in the application of a toggle-jointed lever at one end of a walking beam, to give motion to the dasher of a perpendicular dash churn.

Claim.—The arrangement of the toggle-joint F, walking beam E, crank H, and connecting shaft I, operating substantially as described and for the purpose set forth.

No. 27,206.—ARCHIBALD H. CROZIER, of Oswego, N. Y.—*Improved Machine for Cutting and Distancing Locks on Hoops*.—Patent dated February 21, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim hinging the jaws which hold the hoop, so as to allow them to vibrate, or arranging them to traverse, and mounting them on a spring, substantially as described, so that may be moved to carry or feed the hoop to the cutter that cuts the lock or score; and in combination with the jaws for holding the hoop, I claim the cutter for cutting the lock.

I claim a yielding gauge, so constructed as to allow the operator to vary the length of the hoops somewhat in proportion to the thickness or crooks in the hoop worked.

No. 27,207.—S. S. CERTIS, of Croton Corners, N. Y.—*Improvement in Cooking Stoves*.—Patent dated February 21, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Curving the fire-back K concentrically with the line described by the grate *g*, when vibrated or turned substantially as and for the purpose set forth.

No. 27,208.—JOB A. DAVIS, of New York, N. Y.—*Improvement in Sewing Machines*.—Patent dated February 21, 1860.—This invention consists in operating the shuttle driver and shuttle by means of or through a suspended lever, which is worked directly from and by the driving wheel of the machine, and connecting such lever with the shuttle bar by means of a flexible spring or joint.

Claim.—Connecting the lever B, having its fulcrum near to the power shaft, as set forth, with or to the driver C by the spring E, or flexible bar, as and for the purpose described.

No. 27,209.—SYLVESTER DENTON, of Penn Yan, N. Y.—*Improvement in Fences*.—Patent dated February 21, 1860.—A is the sill; it has a mortise in the centre; this mortise is made to receive the lower end of the upright B, also the post D; at the edge of the sill is a dove-tailed gain; this gain is made to receive the lower end of brace H.

Claim.—The sill A, upright B, post D, cleats F, and brace H, and the method of securing it, when constructed and arranged as specified and for the purposes set forth.

No. 27,210.—GEORGE W. DICKINSON, JR., of Breckenridge, Va.—*Improved Surveying Compass*.—Patent dated February 21, 1860.—The object of this invention is to arrange a surveyor's compass in such a manner that the same, by means of a series of adjustable scales, serves to solve all triangles and all rectilinear figures which may occur in the various operations of a surveyor.

Claim.—The arrangement of the scales *e f g* and *h* in combination with the main semi-circle C, and with the additional semi-circle F and protractor G, constructed and operating substantially as and for the purpose specified.

No. 27,211.—H. W. DOPP and WILLIAM S. MEAD, of Buffalo, N. Y.—*Improvement in Burners for Vapor Lamps*.—Patent dated February 21, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim*, first, the arrangement of the pipe A, wick tube c, and stop-cock *a*¹, by means of which the fluid is supplied to either or both of the pipes or tubes A and c; said cock being operated by means of a cam wheel D, substantially as and for the purpose specified.

Second. Arranging the burner G with the heater B, in the manner specified, the burner being secured to the heater, and the heater being provided with pins E which pass through the dark portion of the flame above the burner, substantially as specified.

Third. The arrangement of the burner G, heater B, pipe A, and tube c together, substantially in the manner and for the purpose specified.

No. 27,212.—ELIAKIM B. FORBUSH, of Buffalo, N. Y.—*Improvement in Apparatus for the Ventilation of Railroad Cars*.—Patent dated February 21, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the arrangement of the revolving aprons A A¹, water and ice tank E, and stove K, (or other heating apparatus,) in a separate apartment or room within the car, relatively to the blower H, for the purposes described.

I claim the described arrangement of the distributing air pipes S S¹ and T, when arranged relatively to the described apparatus for purifying the air from dust, as set forth.

No. 27,213.—WILLIAM L. FORCE, of Keyport, N. J.—*Improvement in Oyster Dredges*.—Patent dated February 21, 1860.—This invention consists in supporting and hinging a peculiarly shaped rake, upon sled runners of sufficient width to prevent their sinking in the mud. and in arranging in a suitable manner upon the arms of the dredge a deflecting board, which is acted upon by the water so as to force the rake downward and keep it upon the bottom of the river.

The inventor says: I *claim*, first, the combination of the sled runners A A and deflecting board F, when the same are arranged in the manner and operate as set forth.

Second. I claim the flat-headed rake head in combination with the teeth *a a*, when said teeth are bent over the front edge of the head; all in the manner and for the purposes set forth.

No. 27,214.—JAMES E. A. GIBBS, of Mill Point, Va., assignor to J. O. Wood, of New York City.—*Improvement in Sewing Machines*.—Patent dated February 21, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the mechanical production of the interlaced chain stitch in an organized sewing machine, by the combination, with the reciprocating eye-pointed needle and discoidal thread case or rotary hook and bobbin, or their equivalents, of the described automatic feeding mechanism to the cloth when so arranged in relation to, and operating in concert with, the said devices as to cause each loop taken from the needle to be carried by the hook through the preceding loop, substantially in the manner described.

Second. The combination and arrangement, substantially as described, of the eye-pointed needle, discoidal thread case, provided with two loop-taking hooks, with an automatic feed mechanism, operating in the manner set forth, so that a mere change in the direction of the feed shall effect the difference described between the several stitches.

No. 27,215.—JEREMIAH HEATH, of Providence, R. I.—*Improvement in Heel Screws for Skates*.—Patent dated February 21, 1860.—This invention consists in fixing in the centre of a suitable wheel, furnished with handles or holes punched in its periphery, a suitable screw which is capable of being rotated with the roller, and which, by turning said roller, will be forcibly driven into the heel of the boot, either before or after the skate is strapped to the foot.

Claim.—The wheel and screw, arranged and operating substantially in the manner and for the purposes set forth.

No. 27,216.—CHAUNCEY O. GREENE, of Troy, N. Y.—*Improvement in Cooking Stoves*.—Patent dated February 21, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The hollow cylindrical transversely-grooved grate bar, or grate bars N, when arranged lengthwise of, and so as to be capable of revolution within, the oblong fire box A, and having communication at one end with the open air, and at the other end communication with the smoke flues of the stove, by means of an air passage or air passages, arranged in contact with the outside of or leading through the part or parts of the oven not sufficiently heated by the fire box and smoke flues, substantially as and for the purposes set forth.

No. 27,217.—JOSEPH GRICE, of New York, N. Y., and ROBERT H. LONG, of Philadelphia, Pa.—*Improvement in Running Gear of City Railroad Cars*.—Patent dated February 21, 1860. The claim and engravings explain the nature of this invention.

The inventors say: We *claim* the vibrating truck C, pivoted in advance of its axles in

the line of motion of the car, in combination with the arcs C^1 and C^2 , and friction rolls K, with suitable bearing surfaces in the bottom of the car body; the whole constructed and operating substantially as specified for the purpose set forth.

And we also claim, in combination with a vibrating truck pivoted at a point not over the axles, the employment of sustaining arcs, so arranged on each side of the axles as to support the car and relieve the turning point of all weight, as specified.

No. 27,218.—THOMAS HANSON, of New York, N. Y.—*Improvement in Apparatus for Supplying Water to Buildings*.—Patent dated February 21, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim combining the engine which is operated by the head of water with the pump, forcing water to the upper part of the building by means of a lever, with a shifting adjustable fulcrum, substantially as and for the purpose specified.

I also claim the arrangement, substantially as described, of the engine and pump, so that the connecting lever can be removed, and a hand lever substituted, as described, that the pump may be operated by hand when, from any cause, the pump cannot be operated by the engine.

I also claim the split packing rings and plates secured thereto, substantially as described, in combination with the conical boss on the piston rod, substantially as described, to render the piston self-packing by the pressure of the fluid.

No. 27,219.—SAMUEL H. GILMAN, of New Orleans, La.—*Improvement in Apparatus for Evaporating Saccharine Juices*.—Patent dated February 21, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim, in the construction of pans or kettles for evaporating saccharine juices or other liquids, making the bottoms thereof of a series of vertical compartments, open at the upper edge to receive the liquid from the upper part of the pan or kettle, and closed at the bottom, except for the purpose of connecting the inside of the series, and with open spaces between every two of the series forming continuous passages open to the flue space, except where obstructed by the connecting pipes for the action of the products of combustion, substantially as and for the purpose specified.

I also claim making each of the said compartments of the series constituting the bottom of a pan or kettle, separate from the others and from the upper part of the pan or kettle, and provided with flanches to connect it with the series and with the lower edge of the upper part of the pan or kettle, substantially as and for the purpose specified.

I also claim increasing the heating surface of each pan or kettle of a train relatively to its liquid cubical contents, in the ratio of its greater distance from the furnace, by making the series of compartments constituting the bottom thereof, substantially as described, of greater depths each in succession as they are more distant from the furnace, for the purpose described.

I also claim the manner, substantially as described, of connecting the series of pans or kettles constituting the train by means of the flaring sides, substantially as described, in combination with the manner of connecting the bottoms therewith, substantially as described, and for the purpose specified.

And, finally, I claim the vibrating dipper, connected and combined with the pans or kettles, substantially as described, for the purpose of transferring the liquid from one pan to the next in the train, as set forth.

No. 27,220.—GEORGE E. HOYT, of Brooklyn, N. Y.—*Improvement in Machinery for Breaking Coal*.—Patent dated February 21, 1860.—This invention consists in the use of a plunger armed with teeth, and placed over an intermittingly rotating or a rectilineally reciprocating screw, which serves as a bed for the toothed plunger, the above parts being also used in connection with a gauge and rake.

Claim.—In connection with the plunger and screen, the gauge M and rake H, arranged substantially as and for the purpose described.

No. 27,221.—CHARLES W. HUBBARD, of Pittsburgh, Pa.—*Improved Machine for Polishing and Grinding Saws*.—Patent dated February 21, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The use of an adjustable friction roller, set in a swinging frame, and pressed up by springs, in combination with another friction roller on a permanent revolving axis, for the purpose of revolving the saw at a uniform speed differing from that of the grindstone, independently of the motion of the stone, and unaffected by it, thus preventing the tendency of the stone to affect the revolutions of the saw.

No. 27,222.—ENOCH JACOBS, of Cincinnati, Ohio.—*Improvement in Joining Plates of Metal*.—Patent dated February 21, 1860.—A represents the plates to be united, and B the splice plate;

B the form of the splice plate when rolled into its proper shape; *c c* represent the form best adapted for the rivets to fasten the plates together.

Claim.—The construction of the joint, made by means of the closely abutting plates *A A*, and the flat and semi-cylindrical plate *b b*¹ and rivets *c c*¹, substantially in the manner and for the purposes set forth.

No. 27,223.—DANIEL JONES, of Boston, Mass.—*Improved Steering Apparatus*.—Patent dated February 21, 1860.—The object of this improvement is to secure a direct thwartship action of a screw upon the tiller, and at the same time to leave the tiller in a condition to be readily operated by block and tackle in case of an accidental derangement of the steering apparatus.

The inventor says: I *claim* the direct application of the power of the traversing screw *H* to the tiller *C* or the yoke tiller *L*, in the manner described, when the steering wheel operates the screw *H* by single gear, and is placed on the middle line of the ship, as specified and shown.

I also claim, in combination with the above arrangement, the cam yoke tiller *L*, constructed and operated substantially as described.

No. 27,224.—GILBERT DANIEL JONES, of New York, N. Y.—*Improvement in Mills*.—Patent dated February 21, 1860.—This invention consists in forming the bottom or grinding surfaces of runners conical, in the form of an inverted cone, and in forming the bed with corresponding conical surfaces.

Claim.—Constructing the bottom or grinding surfaces of the runners conical, in the form of an inverted cone, and the bed in and around which they revolve, with corresponding conical surfaces, substantially in the manner described.

No. 27,225.—W. J. JOHNSON, of Newton Corner, Mass.—*Improved Dish Cloth Holder*.—Patent dated February 21, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The described dish cloth holder, constructed with round or square jaws or tines, and bent or curved in such a manner that the cloth will be suitably retained by the same and held in a closed state by a metal slide, or its equivalent, forming a new article of manufacture.

No. 27,226.—FERDINAND C. LIGHTE, of New York, N. Y.—*Improvement in Grand Piano Fortes*.—Patent dated February 21, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The construction of the iron frame with two plate-like portions *A B*, one elevated above the other, and with an opening *a b* between them for the turning pins of the wrest plank, and constructing the wrest plank with a step *h* and fitting it to the bottom of said parts, *A B*, of the frame, all substantially as described.

No. 27,227.—JOHN LIPPINCOTT, of Pittsburgh, Pa.—*Improvement in the Manufacture of Axes*.—Patent dated February 21, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Making axes with a head of cast iron, cast into and around a steel bit and afterwards finished and dressed, as hereinbefore described, as a new article of manufacture.

No. 27,228.—JAMES W. LYON, of Brooklyn, N. Y.—*Improved Machine for forming Guard or Gas Cocks*.—Patent dated February 21, 1860.—This invention consists chiefly in the peculiar arrangement of the stationary taper mandrel *L*, with relation to the position of the cutter when in action, so that the barrels can be rapidly and successively placed on the mandrel and removed by the operator without removing the mandrel, and at the same time placing the portion necessary to be removed is properly presented to the action of the cutter.

The inventor says: I *claim* the combination of the taper mandrel *L* with the rotating cutter *H*, substantially in the manner and for the purposes herein described. The arrangement of the adjustable gauge *Q* with relation to the mandrel *L*, substantially as described.

No. 27,229.—A. G. MACK, of Rochester, N. Y.—*Improvement in Last Holders*.—Patent dated February 21, 1860.—This invention consists of a movable standard having attached to it a spring rod the upper end of which is inserted in the last, an upright standard with a sliding rest for the toe of the last, and an eccentric by which the sliding rest is raised or lowered.

Claim.—The arrangement of the movable standard *M* and spring rod *r*, with the upright standard *B*, sliding rest *D*, and eccentric *E*, as and for the purposes set forth.

No. 27,230.—WILLIAM S. MEAD and H. W. DOPP, of Buffalo, N. Y.—*Improved Ventilating Valve for the Delivery of Liquids*.—Patent dated February 21, 1860.—This invention consists in the employment of an elastic diaphragm, provided with a shut-off ventilating tube, in combination with an air chamber, within which said diaphragm is so arranged that it will be raised or lowered, to open and shut off the ventilation by either the atmospheric pressure without or the pressure from gaseous liquids within.

Claim.—The employment of an elastic diaphragm B, provided with a ventilating tube C, in combination with an air chamber A, the whole being arranged and constructed substantially in the manner and for the purpose set forth.

No. 27,231.—RENSSELAER MERRILL, of Elmira, N. Y.—*Improved Clothes Dryer*.—Patent dated February 21, 1860.—This invention relates to a portable, self tightening, self securing, revolving clothes reel, for the purpose of drying clothes.

Claim.—The combination of the collar C, cap A, and braces D and E, with the radial arms B, when constructed and arranged in the manner and for the purpose set forth.

No. 27,232.—JOHN S. MITCHELL, of South Boston, Mass.—*Improvement in Spring Skates*.—Patent dated February 21, 1860.—The claim and engravings explain the nature of this invention.

Claim.—An improved skate, having its foot rest A constructed not only with sockets *a a* for the reception of helical springs *b b*, for supporting the foot rest on the runner B, but with separate sockets *c c*, and lateral passages *d d*, arranged with reference to the springs *b b*, substantially in the manner, and to receive tenons and holding pins or stops connected with the runner, as described.

No. 27,233.—ELIAS PARISH and WATSON PARISH, JR., of Galesburgh, Ill.—*Improvement in Mole Ploughs*.—Patent dated February 21, 1860.—A is the mole or plough, having a groove H running from the point up and back to the coulter C upon a sliding piece B, which is hinged to the coulter C, as shown at B¹; another groove G is also formed near the bottom of the mole, commencing at the point and running back on each side to the rear of the plough.

The inventors say: We *claim*, first, the combination of the grooved hinged piece B with the coulter C and mole part A, arranged and operating substantially as set forth.

Second. The combination of the hinged plane E, roll F, hinged bearings *h h*, and scrapers *f f*, with the rear end of the draft beam D, substantially as set forth.

No. 27,234.—JOHAN F. C. PEIKHARDT, of New York, N. Y.—*Improved Sofa Bedstead*.—Patent dated February 21, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement of the cushions K L M, as shown and described, to wit: the cushions L M, connected by hinges *f*, cushion L being attached to the bars I by means of the hooks *g g* fitting in the slots *h h* thereof, and the cushion M attached to the posts A A by means of journals *j* fitting in either of two pairs of grooves or recesses *k l*, while the cushion K is connected to the bars I by hooks *n* fitting in the slots *h*, substantially as and for the purpose set forth.

Second. In combination with the cushions K L M, the adjustable and folding side pieces O O, arranged as shown, to form sides for the article when used as a bedstead, and be capable of being folded compactly against the side rails D when the article is used as a sofa.

No. 27,235.—WORDEN P. PENN, of Belleville, Ill.—*Improvement in Horse Powers*.—Patent dated February 21, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the loose cap C with the hub E of the wheel D and the ends of the bars B, and also bracing the said bars from the said cap C by means of chains *e e e*, for the purpose of taking the stress off of the rim of the wheel D and concentrating it in the said cap, and also the combination of the spider bracket *b* with the loose cap C and the centre pin and the hub E, for the purpose of securing the ends of the bars B, substantially as described.

No. 27,236.—THADDEUS S. SCOVILLE, of New York, N. Y.—*Improved Mosquito Bar*.—Patent dated February 21, 1860.—To the tops *a a* of the head posts, or other convenient parts of the bedstead, are secured the vertical supporting rods *b b*, and on these rods respectively are situated the adjustable supporting blocks *g g*, which are secured at any desired point on the rods by means of set screws *h h*; on these supporting blocks rest the hinges *f f*, arranged so as to turn horizontally on the rods *b b* and vertically on the joints *m m*.

Claim.—The combination and arrangement of the supporting posts *p p*, adjustable doubly-turning hinges *f f*, curtain frame *c d*, cords *i i*, pulleys *k k*, and balance weight *l*, substantially in the manner and for the purpose specified.

No. 27,237.—THOMAS S. SMITH, of Cincinnati, Ohio.—*Improvement in Floors of Malt Kilns.*—Patent dated February 21, 1860.—The claim and engravings explain the nature of this invention.

Claim.—In combination with the perforated plate A, the tessellated frame work C B, the upper edges of which are rounded as described, the whole being arranged in the manner as set forth, for the purpose of enabling the heated air to pass equally upward through the perforated plate, there being no obstructing surface under the said perforated plate.

No. 27,238.—ABRAHAM REESE, of Pittsburgh, Pa.—*Improved Rivet and Bolt Machine.*—Patent dated February 21, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the use of a sliding die carriage working upon rollers, in the manner described.

Second. The combination of a heading tool, reacting by means of a spring with a trip hammer, so arranged as to give repeated strokes on the heading tool between each stroke of the gripping dies and with dies forming a matrix for the head of the bolt or rivet, for the purpose of forging the heads of bolts and rivets into shape, when inclosed in a die, by repeated blows of the hammer on the heading tool working in the cavity of the heading dies, in the manner hereinbefore described.

No. 27,239.—P. H. ROOTS, of Connersville, N. Y.—*Improvement in Water Wheels.*—Patent dated February 21, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The recesses *f* and the pistons C, of described configuration, so as to insure requisite strength, in combination with the cylinders A D, so as to prevent the retardation of the piston by the water as the pistons enter and leave the recesses, substantially as and for the purposes set forth.

No. 27,240.—AUGUSTUS PRUYN, of Albany, N. Y.—*Improved Device for Allowing for Contraction or Expansion of Buck Saw Blades.*—Patent dated February 21, 1860.—This invention relates to an improvement in that class of handsaws which are formed of thin narrow steel plates or strips, strained in frames, such as those for sawing fire wood, and also those used by joiners for sawing scroll or curved stuff.

Claim.—The combination with the saw blade and saw frame of a spring *c*, when the said spring is placed within a slotted opening in the blade and covered by the frame, as and for the purpose shown and described.

No. 27,241.—AUGUST SEMMENDINGER, of New York, N. Y.—*Improvement in Photographic Cameras.*—Patent dated February 21, 1860.—This invention consists in combining a spring board with the usual photographic apparatus, for the purpose of facilitating the sliding operation of the glass holder or other holder on which the picture is to be taken, and also in providing the said glass holder with double grooves and the light-diminishing board with double tongues.

The inventor says: I *claim* the spring board A in combination with a photographic apparatus, in the manner and for the purpose substantially as described.

Also the double grooves *e*¹ and *n*¹ and the double tongues *e* and *n*, in combination with the glass holder B, substantially in the manner and for the purpose set forth.

No. 27,242.—GEORGE W. RAMSEY, of New York, N. Y.—*Improvement in Steam Ploughs.*—Patent dated February 21, 1860.—The swing frame F extends forward to the front end A, and also extends back a sufficient distance to receive the fixed shaft I, which forms a part of the said frame, and upon which the two plough cylinders J J with spiral cutting blades are held in proper position and made to revolve by the endless chain *k* working upon the chain wheels L on the outer ends of the two cylinders and also upon the outer sides of the travelling wheels B.

Claim.—The arrangement of the plough cylinders J J, driving wheels, guide wheel, boiler, and engines; the whole being constructed, operated, and operating as shown and described.

No. 27,243.—ALVA M. SOUTHWORTH, of Dorchester, Mass.—*Improved Attachment for Sail Cringles.*—Patent dated February 21, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the broad metallic plate secured to the yard, and having formed on it a flange or shoulder, and the sliding hook engaging with the said flange or shoulder and the head cringle of the sail, as described.

No. 27,244.—TIMOTHY SULLIVAN, of New York, N. Y.—*Improved Tool for Cutting and Pulling Thread*.—Patent dated February 21, 1860.—This invention consists of a knife-like blade A bent downwards so as to form an inclined plane, and to allow its points to catch more readily under the thread. The point B is rounded so as to form a finger-like prong, and it is bent so that it is parallel with the handle C. The blade A terminates in a shoulder *a*, which prevents the thread slipping beyond the cutting edge.

The inventor says: I *claim*, first, the combination of the blade A with the finger-like prong B, or its equivalent, substantially in the manner and for the purpose specified.

Second. The arrangement of the spring jaw D in combination with the blade A and prong B, constructed and operating substantially as and for the purpose described.

No. 27,245.—BENEDICT SWAIN, of Washington, D. C.—*Improvement in Projectiles for Fire Arms*.—Patent dated February 21, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the combination of a flat spiral tail with a conical tail so constructed as to form a shoulder for the wooden packings to rest against, thereby causing the head of the shell to receive the full force of the discharge of the gun; at the same time I secure the wooden packings at the extreme end by the use of a metal sabot, which sabot also protects the composition which is pressed into the hollow shaft in the tail, intended for a rocket or to fuze the head of the shell.

No. 27,246.—AARON W. SWEET, of Cincinnati, Ohio.—*Improvement in Conical Grinding Mills*.—Patent dated February 21, 1860.—This invention relates to the construction of the cone and concave of a conical grinding mill, by which the grain is automatically fed to the mill with such regularity as to dispense with the use of an adjustable hopper, or such other devices by which a regular and gradual feed of the grain is effected in conical mills.

Claim.—In combination with the conical cracking and grinding surfaces on the burr and concave, the feeding cone and its concave, constructed and arranged substantially as described.

No. 27,247.—H. R. TAYLOR, of Roxbury, Mass.—*Improvement in Supporting Furniture Drawers*.—Patent dated February 21, 1860.—This invention consists of a device for bringing out the slides B with the draw at the first part of its movement, and when brought out as far as they are intended to move, releasing the draw to let it continue its movements without the slides.

Claim.—Bringing out the slides B, with the first part of the movement of the drawer, substantially as set forth.

No. 27,248.—CHARLES VAN BONHORST, of Hancock, Md.—*Improvement in Lamps*.—Patent dated February 21, 1860.—This lamp has two wick tubes with an air space between and around the tubes and draft passages; the flames of the two wicks mingle together, and the smoke between and around the bases of the flames is supplied with oxygen.

Claim.—The combination of the air space *c*¹, air space B, draft passage *c*, and draft passage *a*, in the manner and for the purpose described.

No. 27,249.—A. A. WASHBURN, of St. Johnsville, N. Y.—*Improved Washing Machine*.—Patent dated February 21, 1860.—This invention relates to certain improvements in that class of washing machines in which a concave swinging tub and a stationary washboard, together with two pounders, are employed. The fluted rollers in the washboard and a corrugated bottom, together with the peculiar shape of the pounders, facilitate the washing.

Claim.—The arrangement of the fluted rollers E, in the stationary washboard D, and combination with the corrugated bottom of the tub and with the concaves *i*, in the pounders F, substantially as and for the purpose specified.

No. 27,250.—JOHN W. WHEELER, of Cleveland, Ohio.—*Improvement in Grain Mills*.—Patent dated February 21, 1860.—This invention relates first to certain peculiarities in the dress, and second to an improvement in the means of feeding the mill.

The inventor says: I *claim*, first, the stationary adjustable hopper C, in combination with plate Z, for regulating the feed of the grain to the cones.

Second. I claim the recess or grooves *d*¹ between the dress rings, whether in connection or not with extending a few of the teeth or ridges *e*¹ of the dress across the recesses or grooves, as and for the purposes set forth.

No. 27,251.—ANDREW WILLMANN, New York, N. Y.—*Improvement in Compositions Formed of Caoutchouc*.—Patent dated February 21, 1860.—The claim explains the nature of the invention.

Claim.—The combination with the rubber or its compounds of coke, or its equivalent,

when reduced to a finely divided state, together with the anhydrous alkaline salts mentioned, and whether the latter be used separately or in combination, substantially in the manner and for the purposes set forth.

No. 27,252.—CHARLES B. WITHINGTON, of Rock, Wis.—*Improvement in Harvesters*.—Patent dated February 21, 1860.—This invention relates to an improvement in the raking apparatus and the manner of discharging the cut grain from the platform; *a* is a pulley upon the main supporting shaft, on the inside of the main supporting wheel; *c* is a belt which encircles the said pulley and connects it with the pulley *a*¹ on the shaft *d*.

Claim.—The combination of the spring *W*, connecting rod *V*, shaft *i*, sliding rake head *L*¹, guide *q*, loose pulley *f*, ratchet wheel *j*, spring *g*, and catch *h*, when these several parts are arranged in relation to each other and to the main frame and platform in the manner described, for the purposes specified.

No. 27,253.—A. H. WOOD, of Boston, Mass.—*Improved Engraver's Vise*.—Patent dated February 21, 1860.—The object of this invention is to produce such a holding and bearing surface during the process of engraving, and other analogous purposes, as not only to firmly grasp the outside to be engraved or operated upon, but also to allow the said apparatus to yield in some degree, so that the work, however irregular in its shape and varying in its thickness, shall be firmly held.

Claim.—The combination of a proper spring and the tilting frame *c c*, operating together in a suitable stock or standard, as described and for the purpose specified.

No. 27,254.—CHARLES WRAY, of San Francisco, Cal.—*Improvement in Furnaces for Plating Iron*.—Patent dated February 21, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* combining with the crucible and the means of applying heat thereto, the employment of a muzzle or roof to the crucible, leaving a narrow opening on opposite sides for introducing the sheets of iron or other articles to be plated, and for drawing them out of the molten metal, substantially as and for the purpose specified.

And I also claim, in combination with the crucible covered with a muzzle or roof and heated in the manner described, the placing of the fire door or doors above the muzzle or roof, substantially as and for the purpose specified.

I also claim, in combination with the crucible covered with a muzzle or roof and heated, as described, making the openings through the outer shell of the furnace inclining upward and outward from the opening in the crucible, through which the articles being plated are drawn out of the crucible, substantially as and for the purpose specified.

And I also claim, in combination with the crucible and the surrounding fire chamber, constructing the side walls of the surrounding masonry with an opening in area equal to the sectional capacity of the internal chamber which contains the crucible, and closing such opening with movable sections, substantially as and for the purpose specified.

No. 27,255.—JONES YERKES, of Philadelphia, Pa.—*Improved Refrigerator*.—Patent dated February 21, 1860.—This invention consists of a refrigerator having four compartments, (each having an inlet and exit opening,) an ice chamber, and a cold air chamber with a partition, the whole of the parts being arranged in respect to each other and to an air space in the outer casing, so that the whole of the chambers may be thoroughly and equally refrigerated.

Claim.—The upper chambers *G* and *G*¹, with their respective openings *b* and *c*, the lower chambers *H* and *H*¹, with their respective openings *d* and *e*, the ice chamber *I*, and the cold air chamber *J*, with its partition *h*, the whole of the above mentioned parts being arranged in respect to each other and to the air chamber *C*, as and for the purpose set forth.

No. 27,256.—N. B. CLEVELAND, of Waupun, Wis., assignor to LYMAN UPDIKE and J. M. HOSNER, of said Waupun.—*Improved Submerging Barrel Head*.—Patent dated February 21, 1860.—The invention consists in providing a movable barrel head with adjustable arms on its back.

Claim.—The employment of the head *A*, provided with the movable arms *B B*, when the same is used substantially as and for the purpose specified.

No. 27,257.—JOHN M. JONES, of New Orleans, La., assignor to himself and H. O. AMES, of said New Orleans.—*Improvement in Skimmers of Sugar Juices*.—Patent dated February 21, 1860.—This invention consists in furnishing the skimmer with a float, which, resting on the syrup, will support it during the skimming operation; and also arranging it so that any syrup taken up with the skimmings drains back into the kettle or pan.

Claim.—As an improved article of manufacture, a skimmer for sugar and other substances, composed of a metallic bowl *A* and an air chamber or float *D*, constructed and combined substantially as shown and described.

No. 27,258.—DANIEL B. NEAL and H. C. EMERY, of Mount Gilead, Ohio, assignors to themselves and GEORGE E. HOUSE, of said Mount Gilead.—*Improvement in Apparatus for Evaporating Saccharine Juices*.—Patent dated February 21, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim*, first, the employment in the furnace A of two flues, in combination with a central cooling air chamber under the pan, the flues being divided from each other by means of a wall B, and which are provided each with a series of dampers C C¹, substantially as and for the purpose specified.

Second. Providing the bottom of the pan with two flanges, which fit snugly against the sides of the wall B, the flanges, the wall, and the bottom of the pan forming the four sides of an air chamber under the pan, substantially as and for the purpose specified.

No. 27,259.—CHARLES L. ROBINSON, of Waukesha, Wis., assignor to THOMAS G. EGGLESTON, of Fox Lake, Wis.—*Improvement in Tanning*.—Patent dated February 21, 1860.—This invention consists in the employment in combination with terra japonica, which has been purified by sulphuric acid, of carbonate, sulphate or calcined magnesia, and sulphate of potassa, for the purpose of tanning skins and hides of all descriptions.

Claim.—The employment, as and for the purposes specified, in combination with the purified terra japonica liquor described, of carbonate, sulphate or calcined magnesia, and sulphate of potassa in about the proportions set forth.

No. 27,260.—JAMES ROWE, of Cincinnati, Ohio, assignor to himself and MARTIN B. EWING, of said Cincinnati.—*Improvement in Sewing Machines*.—Patent dated February 21, 1860.—This invention relates to the employment of a looper. The looper T is in its construction similar to a needle furnished with two eyes near its point, and a little removed from each other, the looper being curved a little between the two eyes, so that the curve back of the eye nearest the point shall furnish an opening for the needle in its downward passage between the looper and its thread, through which to carry its own loop.

The inventor says: In combination with a needle of a sewing machine, I *claim* the double-eyed curved looper T as constructed, the same being made to operate in the manner substantially as set forth for the purpose described.

No. 27,261.—ELISHA M. SMITH, of Indianapolis, Ind., assignor to himself and ELERIDGE G. MAYHEW, of Shelbyville, Ind.—*Improvement in Moulding Machines*.—Patent dated February 21, 1860.—This invention consists in providing adjustable patterns, and so attaching them to any common sash planing machine as to convert said sash into a circular moulding or circular sash machine.

Claim.—The combination of variable guides and their necessary appendages with a sash or moulding machine, substantially as described in the specification.

No. 27,262.—GEORGE ELLIOTT and GEORGE F. ELLIOTT, of Manchester, Conn.—*Improvement in Locks*.—Patent dated February 21, 1860.—This lock has a series of circular hook plates, so arranged in a case that, in order to unlock it, it is first necessary to disconnect said plates by certain peculiar movements of the key.

The inventors say: We *claim*, first, the combination of the hook plates B B¹, spring pivot h h¹, and inclined slotted eccentric rim F, the whole constructed, arranged, and operating substantially as and for the purpose described.

Second. The movable tumbler E, in combination with the hook plates B B¹, spring pins h h, and eccentric rim F, substantially as and for the purpose described.

No. 27,263.—DANIEL BACH and KASIMIR KRENKLE, of New York, N. Y.—*Improved Folding Bedstead*.—Patent dated February 28, 1860.—When the bed is unfolded and put up for use, the end of the rail B pushes the catch C away until said end comes into the recess of the catch, when the latter falls by its own weight and embraces the end of the rail, and holds the same firm in its place.

Claim.—The application and use of a self-acting catch C to secure and hold the side rail B in the proper place when the bedstead is put up for use, in the manner substantially as described.

No. 27,264.—JOSEPH BISSINGER, of New York, N. Y.—*Improved Bracelet Fastening*.—Patent dated February 28, 1860.—This invention consists in combining a screw with the usual spring latch or catch of the bracelet, for the purpose of locking the said bracelet after being closed, in such a manner that a pressure on the spring or latch will cause an opening of the same.

Claim.—The screw e, in combination with the spring latch or catch n, for the purpose of preventing an accidental opening of the bracelet or necklace, in the manner substantially as described.

No. 27,265.—G. M. BLIGH, of New York, N. Y.—*Improvement in Paint Cans*.—Patent dated February 28, 1860.—The object of this invention is to provide a simple and efficient device for fastening down the covers of cans for putting up paints and other substances, which device allows, at the same time, the opening of said can without the aid of the soldering iron, and without injury to any part of the can.

Claim.—The employment, in combination with the can A, of the swivel catches E, when constructed and arranged as set forth, for the purpose specified.

No. 27,266.—HENRY F. BOND, of Waltham, Mass.—*Reading Card*.—Patent dated February 28, 1860.—The nipper C is made to hold by its power as a spring upon the back or side of the book cover; the long arm of the hook B is thrust in between the leaves, the other arm, to which the cord D is attached, hanging over the open page.

Claim.—The combination of the card, the elastic cord, and the paper knife, for the purposes and substantially after the manner above described.

No. 27,267.—JOHN BRYNER, of Peoria, Ill.—*Improved Counting House Calendar*.—Patent dated February 28, 1860.—The claim and engravings explain the nature of this invention.

Claim.—An arrangement of figures, pins, knobs, or other fastenings (for memoranda) on a board or other material, together with cases for movable names of the months, divided into spaces in which to place any required memorandum or appointment under its proper date, for the purpose of facilitating business men and others in keeping any and all appointments or business of any description to be attended to at any given time.

No. 27,268.—JOSEPH M. BUTLER, of Oxford, Miss.—*Improved Implement for Boring Wells*.—Patent dated February 28, 1860.—The auger *a* is operated within the case *b*; *e* is a valve which opens upwards and closes upon the whole width of the auger thread at a little distance above its cutting edge *c*. When the auger is drawn up, the weight of the sand closes the valve, and it is retained.

The inventor says: I *claim*, first, the employment of wire rope for operating the auger, as set forth.

Second. I also claim making the shaft of the auger hollow, as set forth.

No. 27,269.—WILLIAM CAMPBELL, of Jersey City, N. J.—*Improved Photographic Plate Shield*.—Patent dated February 28, 1860.—This invention consists in providing the photographic camera shield with a revolving plate frame and a slide with one or more small apertures, so that by revolving the plate different parts of the same are successively brought before the apertures of the slide.

Claim.—The revolving plate frame C, substantially in the manner and for the purposes set forth.

No. 27,270.—J. THEODORE CHABOT, of Buffalo, N. Y.—*Improved Steering Apparatus*.—Patent dated February 28, 1860.—By turning the steering wheel C right and left, the screw M is made to revolve correspondingly by its connection with the chains K and L, encompassing the wheels F G H and N, the screw M also moving horizontally, also moving the tiller S right and left, or the tiller Q.

Claim.—The combination and arrangement of the steering wheel F, chain wheels F G H N, double thread screw M, endless chains K L, and screw swivels *v v*, and as connected to tiller, substantially for the purpose specified.

No. 27,271.—JOSEPH CODLING, JR., and JOHN MCCUNIFF, of Fairbanks, Iowa.—*Improvement in Feed Water Heaters for Steam Boilers*.—Patent dated February 28, 1860.—This invention consists in the employment, in combination with hollow bars, of copper tubes passing longitudinally through the said bars, and connecting with transversely arranged cylinders or boxes, which are arranged below them at each end, and provided with connections to the feed pump and tank.

Claim.—The employment, in combination with hollow grate bars, of a system of tubes B B, and cylinders or boxes C C, on connecting pipes D D¹, the whole arranged substantially as specified.

No. 27,272.—LEWIS T. CONOVER, of Philadelphia, Pa.—*Improvement in Vapor Lamps*.—Patent dated February 28, 1860.—This invention is explained by the claim and engravings.

The inventor says: I *claim*, first, the vertical sediment tube and its cup, as arranged in relation to the conducting tube and reservoir and valve, as set forth.

Second. I claim the vaporizing chamber in the horizontal conducting tube, as it is connected with the heating head *n*, having its wicked extension in the conducting tube, and as it is arranged in relation to the feeding tube and burner, as described.

No. 27,273.—GEORGE COPELAND, of Gray, Maine.—*Improvement in Seeding Machines.*—Patent dated February 28, 1860.—This invention consists in the employment or use of a feeding screw D, placed within a suitable hopper A, and used in connection with a rotary throwing device F attached to the seed box.

The inventor says: I *claim*, first, the distributing fan or throwing device F, when constructed in the peculiar form shown and described.

Second. The arrangement and combination of the throwing device F, hopper or seed box A, bag B, and screw D, as and for the purposes shown and described.

No. 27,274.—L. B. CORBIN, of Dryden, N. Y.—*Improvement in Grain Separators.*—Patent dated February 28, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* making the spreading aprons adjustable, so that the degree of inclination of each and any of them may be varied at pleasure, for the purposes before set forth.

I also claim the adjustable frontispiece H of the spreading chamber, in combination with the partition K, the whole arranged to operate as specified, for the purposes set forth.

No. 27,275.—W. G. CRUTCHFIELD, of Dayton, Ohio.—*Improvement in Operating Governor Valves for Steam Engines.*—Patent dated February 28, 1860.—This invention consists in the employment of a cam cylinder H, and traversing lever I, for the purpose of adjusting the valve and regulating the quantity of steam.

Claim.—The arrangement of the sleeves E and F, pinion G, screw shaft K, tubular arm O, lever I, wheels s and x, and cam cylinder H, when the same are used substantially as and for the purpose specified.

No. 27,276.—A. W. CUNNINGHAM, of West Middleton, Pa.—*Improved Churn.*—Patent dated February 28, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the spring dasher, worked by a cam and constructed as described, of longitudinal strips e e e, so set as to present their angular edge to the cream as they strike it, with a box deeper at one end than at the other, to accommodate the stroke of the dasher.

No. 27,277.—JOHN G. DODGE, of St. Louis, Mo.—*Improved Tent Frame.*—Patent dated February 28, 1860.—This invention will be understood by the claim and engravings.

Claim.—Combining the legs e¹ c c c with the beam B, not *per se*, but when the said legs are made with oblong holes in them, so as to open and shut, and close up alongside of the said beam, so as to form a straight fall, all substantially as described.

No. 27,278.—NATHAN S. DODGE, of Indianapolis, Ia.—*Improvement in Horse Powers.*—Patent dated February 28, 1860.—The dental projections c c are so paired and arranged in juxtaposition, as to brace and support each other, and enough of them linked together constitute the endless chain, and a basis for the wooden flexible tread of the platform B.

Claim.—The combination and arrangement of the peculiar shaped right angle braces c c, with the walking cleats B, and the tension rollers A A, substantially as set forth and for the purpose declared.

No. 27,279.—H. WILLIAM DOPP, of Buffalo, N. Y.—*Improvement in Sewing Machines.*—Patent dated February 28, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination of the stationary bobbin case, the hook stretchers, and the thumb and finger, or their equivalents, so arranged as to cross the needle thread after it has been passed over the bobbin, so that the needle may pass down into this cross or loop of its own thread at each subsequent downward movement, for the purpose of running the under thread in a spiral form through a loop stitch, substantially as shown.

Second. The employment of the yielding tooth d, in combination with the vibrating bar k, when the same is used as a relief feed, substantially as specified.

No. 27,280.—EDWARD P. EMERSON, of Blairsville, Pa.—*Improved Composition for Paint.*—Patent dated February 28, 1860.—The inventor says: Provide two kettles of brass, iron, or copper; into kettle No. 1 put thirty-eight gallons of water, take sufficient of this to blend fine fourteen and a half pounds of wheat flour; when perfectly mixed, to be poured into kettle No. 1 that has the water in it, then add, previously well powdered, one hundred and fifty pounds of whiting, seventy-five pounds of pure white hydrate of alumina, the whole to be boiled and kept constantly stirring to prevent it from burning. Into kettle No. 2, put twenty-nine pounds of rosin, and add one gallon of boiled flax-seed oil, when that melts and begins to boil, add twenty-eight gallons of boiled oil; let it simmer, then pour it into kettle No. 1; it is then to be slowly simmered and thoroughly mixed until it forms one homogenous mass;

from this it is to be transferred into a mixing tub, where it is to be agitated thoroughly and well mixed; then to be added four hundred and sixty pounds of pure white silex, free of lumps; add to every hundred pounds of the entire mass sixteen and a half ounces of the silicate of soda, and eight ounces and a half of the sulphate of alumina. It may be levigated in the usual way of levigating or grinding other paints, and colored with any pigment not incompatible with any of the ingredients.

Claim.—The composition of ingredients and mode of manufacturing the fire and waterproof paint, substantially as described.

No. 27,281.—JOHN GORDON, of New London, Conn.—*Improvement in Watches.*—Patent dated February 28, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The employment, in combination with the elongated toothed curb lever *b*, of the arbor *f*, when the said arbor passes through the dial potence plate and cock, and is provided at one end with a pinion *e*, which gears with the teeth of the curb lever, and at the other end with a hand *z*, which moves over the surface of a recess *h* in the dial, which recess has a graduated scale, all as, and for the purpose, shown and described.

No. 27,282.—WILLIAM D. GRIMSHAW, of Newark, N. J.—*Improved Fire Alarm.*—Patent dated February 28, 1860; patented in England, December 29, 1858.—This invention consists in arranging an air tight vessel covered by an elastic diaphragm *B* and filled with air of somewhat higher pressure than that of the external air, in such relation to an index *F* that the expansion or contraction of the air contained in the air tight vessel *A*, caused by a change in the temperature of the surrounding air or gas, can be observed from the motion of the index, and also in combining with the said air tight vessel and index a quadrant *H* and an alarm bell *L* for making a noise.

The inventor says: I *claim*, first, the arrangement of the elastic diaphragm *B*, in the air tight vessel *A*, in combination with the index *F*, or its equivalent, constructed and operating substantially as and for the purpose specified.

Second. Combining with the vessel *A* and index *F* a quadrant *H*, or its equivalent, and alarm bell *L*, or its equivalent, substantially in the manner and for the purpose described.

No. 27,283.—SAMUEL ADAMS, of Toulon, Ill.—*Improvement in Mole Ploughs.*—Patent dated February 28, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The construction of the mole plough described, whereby the earth in the groove at the base of the drain is excavated and conveyed to the sides or top of the drain, substantially as and for the purposes set forth.

No. 27,284.—SAMUEL GILLESPIE, of New York, N. Y.—*Improved Folding Bedstead.*—Patent dated February 28, 1860.—This invention consists in dividing the side rails in or near the centre and hinging the parts to the head and foot of the bedstead, so that they can be folded down on the same in a compact manner.

Claim.—The combination and arrangement of the head and foot boards *c c*, hinged to side rails *A A*, and dovetail *B B*, substantially as and for the purpose specified.

No. 27,285.—GEORGE L. GRIFFIN and J. H. CARPER, of Dallas City, Ill.—*Improvement in Mole Ploughs.*—Patent dated February 28, 1860.—The nature of this invention will be understood by the claim and engravings.

Claim.—Constructing the sword with an advancing and receding angle which converge in a point in advance of the point of a mole, and directly above it, in combination with the said mole, in the manner and for the purposes fully described.

No. 27,286.—THEODORE S. HARRIS, of Boston, Mass.—*Improved Apparatus for Cleansing Tumblers, &c.*—Patent dated February 28, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, an apparatus for washing and cleansing tumblers and other vessels, so arranged as to receive and hold the said tumblers, &c., in position, and having such an automatic motion, of any proper nature, imparted to it by any suitable machinery or means, as to bring the vessels to be cleansed in contact with, and expose them to, the action of a body or jet or shower of cleansing liquid, as set forth.

Second. The apparatus described and shown in the drawings, the same consisting essentially of a revolving platform *a a*, having compartments and partitions for the reception and holding of the tumblers, &c., and actuated by the force of a jet or shower of water or other liquid, as set forth.

No. 27,287.—HENRY C. HASKELL, of Marshall, Mich.—*Improved Pen Rack, Cleaner, and Pencil Sharpener.*—Patent dated February 28, 1860.—A light metal spindle *S* is provided with

an overhanging crank C at one end and a pencil sharpener D at the other, and is hung in bearings formed in the standards A A, so as to revolve at a proper height from the platform B; this spindle carries inside of the bearings a small fly wheel E at one end and a finger wheel F at the other, while the space between is filled with the cylindrically shaped brush G.

The inventor says: I *claim*, first, the use of the revolving brush G, in combination with the two wheels E F and crank C, substantially as and for the purposes described, when connected with a pen rack, as specified.

Second. Attaching to the end of the revolving spindle S any convenient pencil sharpener D, combined with an open box J to receive the shavings, as set forth.

No. 27,288.—URELI C. HILL, of Jersey City, N. J., and HENRY J. NEWTON, of New York, N. Y.—*Improvement in Musical Instruments*.—Patent dated February 28, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim*, first, the use of cast metallic forks in the place of forged ones previously used, when the same shall be arranged and operated as described.

Second. The combination of the strings *o*, sounding board P, cells A A, and forks C C, when arranged and operated as set forth.

Third. The combination of the over key H with the under key N, for the purpose of extending the action of the back ends of the under keys, when the same shall be arranged and operated as specified.

Fourth. Casting the forks C C in a cylindrical form, for the purpose of adding strength of vibration to the cells A A.

Fifth. The extension of the fork prongs F F, by soldering or rivetting soft metal G to the same, as described, for facilitating the tuning of the same.

No. 27,289.—J. W. HOARD and THOMAS A. SEARLE, of Providence, R. I.—*Improved Nail Plate Feeder*.—Patent dated February 28, 1860.—The nature of this invention is explained by the claim and engravings.

The inventors say: We *claim*, first, the employment, in combination with an apparatus for conveying and feeding the plates toward the cutters, of a box containing a pile of plates, the lower one of which is, by an automatic action, discharged sideways from the box and delivered to the feeding apparatus, in a direction transverse to the feed movement, as often as a new plate is required.

Second. The arrangement of the feeding apparatus, or that portion of it which holds the plate and moves it forward, to swing upward and downward on trunnions or with a lever-like movement, substantially as described.

Third. The barrel or conductor F, having attached the tongs and feed rollers, and furnished with a toothed wheel or sector N, through which it receives a movement back and forth on its axis, and a cam Q, through which it receives a longitudinal movement back and forth, as described.

Fourth. The arrangement of the sector O and cam P, in combination with the wheel or sector N on the barrel, substantially as described.

Fifth. The combination, with the eccentric groove *l* in the cam Q, of a lever-like bar R, furnished with a pin or projection *n*, and having applied to it a spring *p*, substantially as described.

Sixth. In combination with feed rollers, applied as described and furnished with ratchets, we claim the pawls *q q*, headed rods S, and ring *t*, applied in relation to the barrel or conductor F and the cylinder E, or bearing of said barrel or conductor, to operate the rollers, substantially as described.

Seventh. Controlling the action of the cam shaft D, by which the plates are discharged from the box B, by the action of the plates passing through a recess 7 in the barrel or conductor F, substantially as described.

No. 27,290.—W. W. HOWELL, of Columbus, Miss.—*Improvement in Cotton Gins*.—Patent dated February 28, 1860.—The cotton gin has a thrasher combined with it, and also a mote brush revolving in a reverse direction to the stripping brush. The thrasher cleans very dirty cotton before it passes to the gin saw. The saws gin or deprive the partially cleaned cotton of the seed; a conveyor carries off the seed; the cotton, after being ginned, is carried through the slitted breast and is met by a rapidly revolving mote brush which whips, with an upward action, the motes or imperfect seed out of the cotton while it is straddling the saw teeth.

The inventor says: I *claim* the arrangement and combination of the thrashing and preparing cylinder C, the folding top L, the conveyor *g g*¹, with the cotton gin, in the manner and for the purpose described.

I also claim the combination of a cylinder of ginning saws *m m*, the two brushes F and G, (one a dirt brush and the other a stripping brush,) the transverse shaft or air flue H *n*, and the longitudinal dirt discharge flue I, substantially as and for the purposes set forth.

No. 27,291.—JOHN S. HUGGINS, of Timmons ville, S. C.—*Improvement in Seed Planters*.—Patent dated February 28, 1860.—The drum B is charged with seed through the doors or opening sections, which are then locked with the bars *n*, and the team being attached to the forward end of frame *d*, and the handles D being grasped by the operator, the machine is to be drawn over the field; the share F forms the furrow, into which the seed is continuously discharged through the exits *a*, as the drum B rotates on its axis *s*.

The inventor says: I *claim*, first, the combination, with a series of discharge exits, of the series of shield plates *e*, adjustable cut-offs *o*, and guiding spout C, the whole constructed and operating as specified for the purpose set forth.

Second. The curved furrow former F¹ and shield plate *i*, in combination with the rotating seed drum B, guiding spout C, and shields *e*, the whole constructed and operating as specified, for the purpose set forth.

Third. The arrangement of the drum B, with its wheel heads A, with the continuous frame piece *d*, handles D, and furrow former F F¹, the whole constructed and operating as specified, for the purposes set forth.

No. 27,292.—L. D. HUNT, G. R. SHIPLEY, and B. B. HAWSE, of Morrisville, Vt.—*Improved Washing Machine*.—Patent dated February 28, 1860.—There are ribs *r* on the sides, bottom, and one end of the interior of the box B, to assist in cleaning the clothes, and at the other end is a rubber R, hinged at the bottom of the box, so as to allow it to oscillate with the revolution of the box, the tops of the ribs on either side near it being cut away obliquely so as to admit of its movement, and also prevent it from falling on the bottom of the box.

Claim.—The oscillating rubber R performing the double function of a rubber and of turning over the clothes, in combination with the square box B, having the interior ribs *r*, and operated by its partial revolution on journals *a*, substantially as and for the purposes set forth.

No. 27,293.—HENRY JOHNSON, of Washington, D. C.—*Improvement in Vapor Lamps*.—Patent dated February 28, 1860.—This invention will be explained by the claim and engravings.

The inventor says: I *claim*, first, the use of straight pipes B and C for conveying the fluid to the heater or generator A, and for conveying the vapor or gas from heater A to burner D, in vapor gas burners, operating as described and for the purposes set forth.

Second. I claim the heater or generator A, constructed as described, for conveying the heat to the fluid in the rear of the flame, operating as set forth and described.

Third. I claim placing the screw plugs *b* and *a* above and in right lines with the pipes B and C, as described.

Fourth. The burner D, constructed and operating as set forth and described, for the use of vapor gas generators.

No. 27,294.—HENRY ISHAM, of New Britain, Conn.—*Improvement in Locks*.—Patent dated February 28, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the wheel on the key shaft having a rotary movement and a longitudinal movement in the direction of its axis, as described, in combination with the series of tumblers and the series of interposed wheels, substantially as and for the purpose described.

I also claim, in combination with the series of wheels which actuate the tumblers, and with the wheel on the key shaft, the cylinder on the key shaft and the locking segment, or either of them, the former operating as described, to lock and hold the said wheels in their normal position, and they, when out of their normal position, acting as stops to prevent the inward movement of the said cylinder, as described, and the latter operating, as described, to lock the said wheels in the position in which they are set by the wheel on the key shaft, as described.

I also claim making the bolt with one or two recesses in its edge, to fit the periphery of the cylinder on the key shaft, and with a cogged and non-cogged fillet by the side, in combination with the actuating or cog wheel and cylinder on the key shaft, and the space between the two, and the longitudinal movement of the wheel and cylinder, as described, whereby the cylinder locks the bolt until, by the longitudinal movement, the cylinder is removed out of the path of the bolt, and the wheel is brought into gear with the rack on the bolt to operate it as described.

No. 27,295.—JASPER JOHNSON, of Geneseo, N. Y.—*Improved Blind Operator*.—Patent dated February 28, 1860.—By turning the knob on the inside, the rod R moves up between the guides, pressing against the inner one *g*¹, which yields to it and opens the blinds half way, until the arm is turned in an upright position, when it presses against the outer guide *g*, and turning down again, it throws the blind entirely back.

Claim.—The curved guides *g g*¹ and bent rod R passing through the window frame, in combination with the blind and window frame, when said rod performs the double function of operating and fastening the blind, as set forth.

No. 27,296.—J. J. KENDALL, of Corinth, Miss.—*Improvement in Looms*.—Patent dated February 28, 1860.—This invention consists in certain arrangements whereby the vibration of the lay is made to impart motion to the harness at the proper time.

Claim.—Combining the cam shaft for operating the harness treadles with the lay by means of a wheel F with teeth on each side, pawls G G¹, a lever H, and a rod J, the whole applied and operating substantially as described, for the purpose specified.

No. 27,297.—EDWARD C. KNIGHT, of Philadelphia, Pa.—*Improvement in Couches for Railroad Cars*.—Patent dated February 28, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Dividing a double couch, so constructed as to fold up by means of double hinged rods against the ceiling of a car, into two single couches, by making a third joint in the rods, so that either one double couch or two single couches may be formed, as desired, substantially as set forth.

No. 27,298.—RICHARD F. LOPER, of Philadelphia, Pa.—*Improvement in the Construction of Ships*.—Patent dated February 28, 1860.

The inventor says: The material from which I make the timbers and strengthening pieces is what is usually called "composition." They may be made of what is known as Muntz metal, or of any alloy of copper, zinc, and tin, or of copper and zinc.

Claim.—Constructing steamships, war and other vessels, in part of wood and part of "composition," as described, the parts of composition being formed with the recesses and connected to the wood, as set forth.

No. 27,299.—WILLIAM C. LUTZ, of Jacobs Church, Va.—*Improved Folding Bedstead*.—Patent dated February 28, 1860.—The side rail A¹ is provided with a rectangular mortise *a* at its foot, and with a partly rectangular and partly triangular shaped open mortise *b b* at its head, and the side rail A¹ is furnished with similar open mortises *c d d¹*, which are set in the reverse order of the mortises *a b b*.

Claim.—The arrangement of the peculiarly mortised and tenoned side and end rails, screw dowelled legs, screw tapped posts, and wedge keys, in the manner and for the purpose described.

No. 27,300.—WILLIAM P. MARTIN, of Salem, Mass.—*Improvement in Machines for Finishing Leather*.—Patent dated February 28, 1860.—This invention consists in the construction of the hand or tool holder, or in combining therewith and its tool a spring presser, whereby the tool will not be borne down upon the leather with too great rigidity, while it also aids in reducing any inequality which may be in the leather.

Claim.—Combining the hand or tool holder M and its tool *i*, spring presser or plate N; the same being applied, and made to operate therewith, substantially in the manner set forth.

No. 27,301.—THOMAS J. MAYALL, of Roxbury, Mass.—*Improvement in Razor Straps*.—Patent dated February 28, 1860.—The claim and engravings explain the nature of this invention.

Claim.—As a new article of manufacture, an India rubber or gutta percha razor strap, the hone side of which is formed of emery, sand, or other suitable gritty substance or substances, incorporated with India rubber or gutta percha, substantially as described.

No. 27,302.—JOSEPH B. MCENALLY, of Clearfield, Pa.—*Improved Paper and Letter File*.—Patent dated February 28, 1860.—This invention consists in using in connection with the hook or hooks B, cords or rods, one passing inside of each paper or letter, and leaving their ends attached to the ends of a cylinder A, and retained in proper position by means of spiral terminals *a*.

Claim.—The cylinder A, provided with the hook or hooks B and spiral terminals *a*, in combination with the cords or wires *d e*, being arranged substantially as and for the purpose set forth.

No. 27,303.—JACOB NEIMEYER, of Hamilton, Ohio.—*Improvement in Fastening Saw Handles*.—Patent dated February 28, 1860.—This invention consists in providing the cross-cut saw with a handle that holds with the necessary firmness when it is attached, and yet is easily and instantly removable whenever its removal is required.

Claim.—The compound saw handle described, the same consisting of the combination of the slotted rod B with the parts C and D of the handle and the nut E, all constructed, arranged and operating as and for the purpose specified.

No. 27,304.—JOHN H. NEVIN, of Ogdensburg, N. Y.—*Improvement in Gates*.—Patent dated February 28, 1860.—This invention consists in arranging a gate or door with a double spring hook, in combination with a double hand lever, and with two posts, whereby the gate or door fastens itself when it is shut as well as when it is opened.

Claim.—Arranging a gate or door with a double spring hook B, in combination with a double hand lever C, and with posts D and E, to operate substantially in the manner and for the purpose set forth.

No. 27,305.—MARK S. PALMER, of New Bedford, Mass.—*Improvement in Fishing Reels*.—Patent dated February 28, 1860.—This invention consists in the employment or use of a travelling or reciprocating line guide attached to the reel, and operating automatically, and in such a way as to cause the line as it is wound up to be adjusted evenly on the shaft of the reel.

The inventor says: I *claim* the reciprocating line guide D, applied to the reel, and operated from the gearing connected with the crank *e*, by the right and left screw shaft B, and pivoted nut E, substantially as set forth.

I further claim the arrangement of the pinions *j k*, socket *n*, and bar *g*, substantially as shown, to admit of the ready throwing in and out of gear of the shaft B, with the wheel *c*, as set forth.

No. 27,306.—G. W. PARROTT, of Lynn, Mass.—*Improvement in Sole Cutting Machines*.—Patent dated February 28, 1860.—This invention consists in governing the position of the knife bar and knife during their motions by means of an arm projecting from the knife bar, and guided by a slot or its equivalent.

Claim.—The bar J, attached to the cutter head, in combination with the slot *d*, or its equivalent, operating as set forth, to govern the motions of the cutter, for the purpose specified.

No. 27,307.—CHARLES B. PARSONS, of Burr Oak, Michigan.—*Improvement in Converting Reciprocating into Rotary Motion*.—Patent dated February 28, 1860.—This invention consists in the employment of an endless rack provided with grooves on its side, when used in connection with a gear wheel provided with an eccentric flange.

Claim.—The combination of the grooves *a a*, upon the sides of the rack F, with the eccentric flange C, at the side of the wheel H, when the two are constructed and arranged in the particular manner specified, and for the purpose set forth.

No. 27,308.—SILAS G. RANDALL, of Worcester, Mass.—*Improvement in Pumps*.—Patent dated February 28, 1860.—This invention consists in constructing the piston and valve chambers by uniting the mouths of two cup shaped sections G and H with each other and with the valve partition plate *m*, by means of a closely embracing thimble *d*, which is secured thereto by means of male and female screw threads.

Claim.—The union of the combined piston and valve chambers G and H, with the smaller delivery chamber B, by means of the eduction tube F, when the piston rod D of the pump is conducted from the latter to the former through said eduction tube, the whole constructed and arranged substantially in the manner set forth.

No. 27,309.—JOHN H. REDSTONE and ALBERT E. REDSTONE, of Indianapolis, Ind.—*Improvement in Shingle Machines*.—Patent dated February 28, 1860.—The lever H holds the table M, while the follower G is passed by the groove, and one revolution of the wheel A is made, and one shingle is cut from the block; the follower G is then passed by, or passes the crossing which unites the grooves R and S, when the table M is vibrated or reversed.

Claim.—The cross grooved wheel F, follower G, lever H, when used in connection with the grooved cam B, the slotted bar D, knife plate E, and table rest M, or their equivalents, as set forth.

No. 26,310.—LAWRENCE REID and JOHN ROGERS, of New York, N. Y.—*Improvement in the Manufacture of Glue*.—Patent dated February 28, 1860.—This invention consists in the combined application of heat and alkaline and earthy alkaline substances to the skins or sinews of animals, or such parts of animals as are generally employed in the manufacture of glue.

Claim.—The rapid preparation of glue and gelatine of better quality and increased quantity from skins and sinews by the method described.

No. 27,311.—JOHN RICHARDSON, of New York, N. Y.—*Improved Pen and Pencil Case*.—Patent dated February 28, 1860.—The tubes C D E, with the pencil shaft E¹, may be drawn out from, and shoved into, the shell A, the tube B remaining therein. By turning the head *c* from left to right the tube B will be turned, and the latter will act against the stud *h*¹, and cause the pencil shaft E¹, to be thrown out.

Claim.—The combination of the spirally slotted tubes D F, longitudinally slotted tubes B G, extension tube C, and shell A, arranged to operate as and for the purpose set forth.

No. 27,312.—ALONZO R. ROOT, of Canton, Mo.—*Improvement in Seeding Machines.*—Patent dated February 28, 1860.—This invention consists in arranging in one end of a cylinder a hollow revolving triangular head, with openings in the angles of the same for the full escape of the seed, and upon which are secured radial tubes for distributing the seed broadcast as the head is rotated by a shaft passing longitudinally through the centre of the cylinder.

The inventor says: I *claim*, first, the employment of the hinged screen S within the hopper, in combination with the agitator R, as and for the purpose shown and described.

Second. The arrangement of the feed regulating screw M, sliding block f, stem c, block b, and hollow shaft K, as and for the purpose shown and described.

No. 27,313.—THOMAS SAULT, of Seymour, Conn.—*Improved Air Trap for Steam Engines.*—Patent dated February 28, 1860.—The claim and engraving explain the nature of this invention.

Claim.—The air trap composed of a valve of hard vulcanized India rubber, constructed and applied to operate, substantially as described, between two opposite seats and orifices in a box of metal or other material, whose expansibility by heat is less than that of the valve

No. 27,314.—WILLIAM SHARP, of Catharine, N. Y.—*Improvement in Boxes of Carriage Wheels.*—Patent dated February 28, 1860.—This invention consists in employing conical, or bevelled bearings of unequal inclinations at each end of the hub, having their inclinations in reversed or opposing directions.

Claim.—Constructing the wheels of carriages and other vehicles with reversed bevelled bearings and boxes F G of corresponding form, the outer of said bearings having the *greater* inclination of the two, substantially as and for the purpose set forth.

No. 27,315.—SAMUEL J. SHAW and H. J. BATCHELDER, of Marlborough, Mass.—*Improved Lantern Carrier.*—Patent dated February 28, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The lantern carrier, constructed as described, and for the purpose of supporting a lantern against the breast of a person, and having both arms free to be moved in any direction.

No. 27,316.—ANDREW L. SIMPSON, of Durham, N. H.—*Improvement in Reefing Sails.*—Patent dated February 28, 1860.—The nature of this invention is explained by the claim and engravings.

The inventor says: I *claim* the application of the connected blocks, or equivalents, to the sail and the topsail yards, so as to roll about the yard with the sail, substantially in manner and for the purpose specified.

I also claim the adjustable clasp W, made in two parts, and provided with a screw or screws for connecting them to the sail and adjusting them with reference to the guide rope, as described.

I also claim the application of the covering strip X to the topsail and its opening, in such manner as to enable the said strip to be slid up and down on the sail and to or near the foot thereof, in manner substantially as described.

No. 27,317.—SAMUEL SOLLIDAY, of Sumneytown, Pa.—*Improved Safety Casing for Steam Boilers.*—Patent dated February 18, 1860.—This invention consists in constructing a casing or well for the reception of the boiler of a strong frame work of timber having a lining of stout boiler iron, said casing extending above and below deck, and having a covering of lighter construction than the other parts which, in the event of explosion will be blown off, and the results of the explosion thus be left free to be discharged into the water.

Claim.—The encasing of marine steam boilers within a chamber of sufficient strength to withstand the effect of explosion in all parts except its top, as set forth.

No. 27,318.—JAMES STILLEY, of Cincinnati, Ohio.—*Improved Bread Slicer.*—Patent dated February 28, 1860.—This invention consists of a knife or cutter set diagonally in a rectangular sliding frame adapted to pass through a suitable angular abutment against which the material to be cut is placed, said frame being also provided with an adjustable gauge by which the thickness of slices of bread to be cut may be regulated.

Claim.—The combination of the abutment board A¹, knife C, clearer e, and adjustable gauge F, constructed, arranged, and operating substantially as and for the purposes set forth.

No. 27,319.—ORSON W. STOW, of Plantsville, Conn.—*Improvement in Bending Sheet Metal*.—Patent dated February 28, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, making the folding bar commonly used in such machines in two parts *f* and *i*, one part *i* being adjustable in respect to the folding plate *e*, by means of set screws *n*, or other equivalent means, so as to form a close or open lock for joining two pieces of metal plate or closing around a wire, substantially in the manner described.

Second. I claim arranging the gripping jaw *S*, with the folding bar *f* and *i*, in such manner that, on motion being given to the folding bar *f*, on its axis *g*, the gripping jaw *S* is made to close on the folding plate *e*, and at the same time carry along with it the folding bar *f*, into such a position as will bring its axis *g* of motion, nearly into a line with the edge of the folding plate *e*, thereby placing the folding plate *f* and *i* in position to be turned over on to the folding plate *e*, necessarily and simultaneously with the motion of the folding bars *f* and *i*, on its axis *g*, substantially in the manner as described.

Third. I claim the bed plate proper *a a*¹, to which is secured the folding plate *e*, in combination with the hinged frame *b*, having journal boxes *d*, and gripping jaws *S*, the folding bars *f* and *i*, fixed or adjustable, and having journals *g*, cams *o*, arranged and operating together substantially in the manner and for the purpose described.

No. 27,320.—GEORGE C. TAFT, of Worcester, Mass.—*Improved Drill*.—Patent dated February 28, 1860.—The nature of this invention is explained by the claim and engraving.

The inventor says: I *claim* the arrangement and application of the support piece *S*, the slide rod *I*, the drill shaft and the pawl operating mechanism, as specified, whereby, by the said support piece, not only the vibrating lever *K*, of the pawl, but other mechanism, and particularly an arbor *R*, and an internal gear *Q*, can be sustained and employed to advantage, as explained.

I also claim the arrangement and application of the cammed post *V*, or its equivalent, with respect to the puppet *a*, the ratchet *O*, and pawl *N*, as described.

No. 27,321.—JOSEPH C. TUCKER, of New York, N. Y.—*Improvement in Defecating and Decolorizing Saccharine Juices*.—Patent dated February 28, 1860.—The hydrated alumina may be used in refining sugar either with or without animal charcoal. The claim will explain the nature of this invention.

The inventor says: I *claim*, first, the application, in the refining of sugar or saccharine liquids, for decolorizing or defecating the same, of hydrated alumina, when the same is prepared by decomposing a solution of sulphate of alumina by means of cream of lime, as set forth.

Second. In combination with the foregoing, I claim the method described of separating gypsum from the hydrated alumina by agitating the same, with water and allowing the former to subside, and by drawing off the supernatant hydrate of alumina, substantially as set forth.

No. 27,322.—SILAS O. VAUGHN, of De Kalb, Ill.—*Improvement in Ploughs*.—Patent dated February 28, 1860.—This invention consists in the manner of attaching the beam of the plough to the landside handle, and also to the standard, whereby the beam is rendered capable of being adjusted both laterally and vertically to regulate the width and depth of the furrow as may be desired.

Claim.—The arrangement of the rod *J*, beam *F*, standard *I*, taper hole *e*, strap *G*, screw *a*, slots *b*, eye *H*, plates *c c*, handle *D*, and landside *A*, as shown and described.

No. 27,323.—WILLIAM A. VERTREES, of Winchester, Mo.—*Improvement in Harvesters*.—Patent dated February 28, 1860.—The nature of this invention will be understood by the claim and engravings.

Claim.—The combination with the slotted fingers *d d*, of a cutter having on the same blade a double row of teeth, the upper row having its cutting edges in the plane of the upper surface of the blade, and the teeth in the lower row having their cutting edges in the plane of the lower surface of the blade, and being placed intermediate to the teeth in the upper row, as described, in the construction of reaping machines.

No. 27,324.—AUGUSTUS WATSON, of Loudon, Ohio.—*Improvement in Lining Underground Drains with Cement*.—Patent dated February 28, 1860.—This invention consists in plastering or cementing the arch or crown, and the sides, or either, of underground drains while they are in process of being made, the object being to cause the drain to maintain its form and not fall in, while the bottom portion is left uncemented to allow the water to enter the drain.

Claim.—In combination with a mole for forming an underground drain, a tube for conveying cement or other plastic lining material down to the drain, in such manner that it may be spread by a trowelling mole upon such parts of the drain as may be desired, substantially as described.

No. 27,325.—WILLIAM D. WALKER, of Livonia, N. Y.—*Improvement in the Method of Regulating Wind Wheels*.—Patent dated February 28, 1860.—The movements of the ratchet bar are governed by the ball *g*, hung in such a way that, as the speed of the wheel increases, the centrifugal force carries it outward, which pushes the bar *k* in, through the intervention of the connecting parts *j*, *l*, and *m*, and brings the ratchet teeth into connection with *a*, thus preventing the further expansion of the sail *C*.

Claim.—The combination and arrangement of the balls *g*, compound sliding ratchet bar *k*, hand regulator *s*, *r*, and *o*, as described, with the sails *C*, substantially in the manner and for the purposes set forth.

No. 27,326.—PETER WEILER, of New York, N. Y.—*Improved Machine for Cutting Veneers*.—Patent dated February 28, 1860.—This invention consists in the arrangement of a rotary log carrier with the knife or cutting tool, in such a manner as to produce a simultaneous vertical or longitudinal or drawing cut during the whole time which the knife or tool takes to pass through the log for the purpose of facilitating the cutting operation, and in combination with a rotary log carrier, a tank containing a suitable fluid, and capable of being heated.

The inventor says: I *claim*, first, the use and employment of a rotary log carrier for the purpose of cutting veneers, substantially as specified.

Second. The combination of a rotary log carrier with a knife, in such a manner that the knife may either be moved towards the rotary log carrier, or the knife remain stationary and the rotary log carrier moved towards the knife, for the purpose specified.

Third. The combination of a rotary log carrier and the knife when a lateral motion is given to the knife, or a lateral motion is given to the rotary log carrier, to produce a drawing cut upon the wood, for the purpose of facilitating the cutting operation.

Fourth. The arrangement and combination of a rotary log carrier with a tank *K*, or its equivalent, containing a suitable fluid and capable of being heated and kept hot, and causing the logs to pass through said heated liquid during their revolution, in the manner and for the purpose as described.

Fifthly. Combining with the knife the gauge bar *Q*, in the manner and for the purpose substantially as described.

No. 27,327.—FRANKLIN W. WILLARD, of New York, N. Y., assignor to himself and E. G. ALLEN, of Boston, Mass.—*Improvement in Apparatus for Distilling Coal Oil*.—Patent dated February 28, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of a series of valves *i i*, and ports, in combination with the revolving retort *a a*, so operating as to always leave open one or more of the said ports at the upper portion of the retort, and keep the remaining ports at the lower portion thereof closed, substantially as described, and for the purpose specified.

No. 27,328.—THOMAS BELL, of New York, N. Y., assignor to himself and C. GODFREY GUNTHER, of said New York.—*Improvement in the Construction of Vessels*.—Patent dated February 28, 1860.—This invention consists in having two skins or an inboard and outboard planking, which are put together and secured in such a manner that oakum cannot be driven through between the boards; and in the event of a leak or break through both skins, the leak may be readily found on the inboard side and repaired.

Claim.—The combination of the locust treenails *c*, and wedges *d*, with the inboard planking or frame *E*, and outboard planking *F*, when the apertures which receive the treenails are made tapering in form, and the ends of the nails split and countersunk, as shown and described, for the purpose set forth.

No. 27,329.—WILLIAM BERG, of New York, N. Y., assignor to NESTOR HOUTON, of said New York.—*Improved Wardrobe Bedstead*.—Patent dated February 28, 1860.—The bed and folding portion are supported while folding upon the cams 16, subject however to the restriction exercised by the pins 17, working in the slots in the plates 19, which plates are attached to each of the side pieces 22, the projecting side bearings 18 resting upon the cams 16 for that purpose.

Claim.—The arrangement of the cams 16, supporting ledges or side bearings 18, pins or axes 17, slotted guides and bearing boxes 19, arranged in connection with each other and with the bed frame and case as described; the whole being constructed substantially as and for the purpose set forth.

No. 27,330.—CHARLES J. BRADBURY, of Boston, Mass., assignor to PAUL P. TODD, of Blackstone, Mass.—*Improved Bell Pull*.—Patent dated February 28, 1860.—This invention consists of a knob and handle *A*, with a shank *a*, having its end turned down, and a thread *b* cut upon it, an auxiliary spring *C*, and an adjustable nut *D*, having a slit cut in one end to

accommodate the lever E, and the other end tapped so as to screw on to the end of the shank *b* of the knob and handle A.

Claim.—The arrangement of the spring C, the knob A, and nut D, the shank *a*, the screw *b*, and the lever E, substantially as and for the purpose specified.

No. 27,331.—JOSEPH G. FULLER, of Brooklyn, N. Y., assignor to STEPHEN HALSTEAD, JR., of said Brooklyn.—*Improved Composition for Painting the Bottoms of Vessels, &c.*—Patent dated February 28, 1860.—The inventor says: To one pound of India rubber I apply about one gallon of pure spirits of turpentine, and allow the same to thoroughly dissolve. I then take about twenty pounds of rectified brimstone, and mix therewith the said rubber paste together with about one gallon of linseed oil, and one gallon of gas tar. I also add one pound of powdered verdigris, and one pound of burnt blue vitriol. I permit the compound to remain for about twelve hours, that the various ingredients may become thoroughly mixed or infused, and then add two gallons of linseed oil.

Claim.—The compound of brimstone, tar, rubber, verdigris, and oil, substantially in the proportions and for the purposes specified.

No. 27,332.—JOHN B. JONES, of Williamsburg, N. Y., assignor to Himself, S. W. WALDRON, JR., of Brooklyn, N. Y., and F. F. HALL, of Boston Mass.—*Improvement in Lanterns.* Patent dated February 28, 1860.—This invention consists in cutting or punching suitable slots through angular corners of the uprights or frames for holding the glass plates of the lantern at suitable points for receiving the guard wire, and in securing the wire or wires at said points around the lantern and to the said uprights by passing a suitable wire rod or rods through eyes or loops, which are previously formed at those points upon the guard wire, to be attached to the uprights, which loops project through the slots.

Claim.—The combination of the perforated angle strips E, with the corrugated perforated corner pieces C, guards G, loops or eyes *b*, vertical rods and glasses D, as and for the purpose herein shown and described.

No. 27,333.—ROBERT McLARDY, of Pittsburgh, Pa., assignor to W. McCULLY & Co., of said Pittsburgh.—*Improvement in Tools for Forming the Necks and Orifices of Glass Bottles.* Patent dated February 28, 1860.—This invention consists in making the lugs and plugs of tools for forming the neck and mouth of glass bottles of cast iron instead of steel.

Claim.—Making the lugs and the plugs of cast iron instead of steel, for the purposes before described.

No. 27,334.—HENRY D. MUSSELMAN, of Lancaster, Pa., assignor to himself and WILLIAM D. SPRECKER, of said Lancaster.—*Improved Meat Chopper.*—Patent dated February 28, 1860. The claim and engravings explain the nature of this invention.

Claim.—The series of independent springs M, operating separately on the handles N of the choppers O, in combination with the double removable cross pieces K L, between which they are held, and the adjusting thumb screws X, together with the square-headed and screw-ended pivot rod or bolt I, with its screw-threaded and handled bar P, as also the eye *d*, chopper handles N, when combined in the manner set forth, for the purposes specified.

No. 27,335.—JOHN L. ROWE, of New York, N. Y., assignor to himself and R. F. CLOW, of said New York.—*Improved Police Club.*—Patent dated February 28, 1860.—This invention consists in so arranging a sheath B to fit upon the club A, that when the club is grasped by an opponent, the officer, by actuating the spring catch C, releases the sheath, which is the only part that can be seized or grasped by the opponent, and consequently liberates the club.

Claim.—The employment or use of a sheath B, applied to or fitted on a policeman's club A, substantially as and for the purpose herein set forth.

No. 27,336.—HENRY A. SEYMOUR, of Bristol, Conn., assignor to F. E. DARROW and WILLIAM WEBSTER, of said Bristol.—*Improved Thermostat.*—Patent dated February 28, 1860.—This invention relates to the mode employed to regulate the action of the lever and spring upon the indicating pointer, produced by the expansion and contraction of a ring-shaped metallic bar, composed of two different compositions, secured together, the ring being cut, and one end firmly secured, and the other end free to act, or to be acted upon by the atmosphere to which it is exposed, causing a pointer to indicate upon a dial the variations of the temperature or degree of heat.

The inventor says: I claim forming a connection from the long end of the lever *f*, to and around the pointer spindle *k*, to the end of the tension spring *l*, substantially in the manner as and for the purpose described.

Second. I claim the employment of the button *e* upon the end of the ring-shaped metallic

bar *a b*, to nicely adjust the action of said bar upon the pointer *n*, through the lever *f*, connection *o*, spindle *k*, and spring *l*, arranged and operating substantially as described.

No. 27,337.—SAMUEL LA FORGE, of Cleveland, Ohio.—*Improvement in Waterproof Leather Goods*.—Patent dated February 28, 1860.—The claim will explain the nature of this invention.

Claim.—The article of manufacture herein named, prepared from the undressed skins, exposed to heat, coated with the charged leather solution, and then subjected to the vulcanizing process, as herein set forth.

No. 27,338.—DENNIS ALDRICH, of St. Louis, Mo.—*Improvement in Preparing Hides*.—Patent dated March 6, 1860.—The inventor says: I first soak the hides in clean water until they become limber, and then immerse them in acid liquor, composed of one part of acetic acid, and sixteen parts of water, allowing them to remain in this liquor until the scale is perfectly dissolved. I then place them in a bath composed of seventy parts of water and one part of carbonate of ammonia.

Claim.—The treatment of hides successively with diluted acetic acid, and a solution of carbonate of ammonia, substantially as and for the purpose specified.

No. 27,339.—JOHN ALLISON, of St. Martinsville, La.—*Improvement in Cane Coverers*.—Patent dated March 6, 1860.—The object of this invention is to obtain a machine for covering cane that will during the operation pulverize the earth and cause the seed to be covered with a loose, light, and friable mould permeable to air and moisture.

Claim.—The boards or planks *A A*, with blades *D D*, rotary harrow *J*, and adjustable harrow *K* attached, the frame *E* provided with the roller *F*, scraper *G*, and one or more rotary harrows *H I*, the whole being combined and arranged for joint operation as and for the purpose set forth.

No. 27,340.—JOHN ARMSTRONG, of New Orleans, La.—*Improvement in Steam Boilers*.—Patent dated March 6, 1860.—The claim and engravings will explain the nature of this invention.

The inventor says: I claim the combination of the upright water vessels *A A A*¹, horizontal connecting cylinders *B B* and flues *b b*, the said vessels *A A A*¹ being arranged substantially as described, that their upper portions may constitute steam spaces and their lower parts sediment collectors, as set forth.

And in combination with the said upright water vessels *A A A*¹, horizontal connecting cylinders *B B*, and flues *b b*, I claim the return flues *C C*, passing through the said water vessels and connecting cylinders, as specified.

No. 27,341.—EDWARD H. ASHCROFT, of Boston, Mass.—*Improved Pressure Gauge for Steam Boilers*.—Patent dated March 6, 1860.—The inventor says: I affix on the arbor *a* of the index pointer *b* of the gauge, a wheel or barrel *c*; to this wheel I affix one end of a chain *d*, and wind such chain around the periphery of the wheel and fasten the outer extremity of the chain to the upper end of the superior arm of a bent lever *e*, arranged within the gauge case *A*, and so as to turn on a fulcrum *f*. The inferior arm of the lever is jointed to a rod or bar *g*, so connected with the elastic diaphragm *h* as to be moved thereby and therewith.

Claim.—The improved locomotive engine boiler steam gauge, as made with the coiled spring, the chain and lever arranged and applied directly to the diaphragm rod, and the index pointer shaft, in manner, and so as to operate, substantially as described.

No. 27,342.—J. B. ATWATER, of Ripon, Wis.—*Improvement in Rifled Fire Arms*.—Patent dated March 6, 1860.—The nature of this invention is explained by the claim and engravings.

Claim.—Constructing the barrel, substantially in the manner set forth, to wit: with a diminished number of rifles or grooves, from or from near the centre or middle of the barrel to its muzzle, for the purpose of diminishing the friction of the ball after the powder has exerted its expansive force upon it, as is specified.

No. 27,343.—FRANCIS BASCHNAGEL, of Beverly, Mass.—*Improved Plastic Compound*.—Patent dated March 6, 1860.—A detailed description of this compound would require too much space to be given here. The claim will explain it in part.

Claim.—Combining the powder of leather, previously boiled and dried, with a mixture of solutions of glue and tannin to form a plastic compound, which may be modified and treated in the manner substantially as specified.

No. 27,344.—ALBION BEAN, of Dedham, Mass.—*Improvement in Railroad Car Brakes*.—Patent dated March 6, 1860.—The two weights *F F* are hinged together at *h*, from which

a chain G is led upward and around a guide sheave I, supported by a fork K sustained by the platform frame. From thence the chain is led to a hand windlass L applied to the end of the platform and provided with a ratchet *m* and pawl *n*.

The inventor says: I *claim* the arrangement and application of the lever weight with respect to the trunk frame, the brakes, and the hand windlass, substantially in manner and to operate as described.

I also claim so connecting the two lever weights of the two adjacent truck frames that both be raised by one chain, or its equivalent, applied to either, as set forth.

No. 27,345.—JOHN H. BLOODGOOD, of New York, N. Y., and MOSES A. JOHNSON, of Lowell, Mass.—*Improvement in Felting Machinery*.—Patent dated March 6, 1860.—The shaft K carries a worm M which engages with the wheel N, upon the shaft O of the roll E, by which means motion is communicated to the apron D, which in return revolves the rubber C, the apron being pressed up with sufficient force against the rubber for this purpose.

The inventors say: We *claim* an elastic traversing apron moistened and warmed by steam, and as the sole bed for the material that is being felted, in combination with a revolving vibrating felt, operating in the manner substantially as described, for the purpose set forth.

Second. We claim a felting, or rubbing surface for felting machines, composed of the end grain of wood, and operating as described.

Third. The device for keeping the apron straight upon its roll, consisting essentially of the independent end pieces S, cord *t*, and spring P, or their equivalents, operating substantially as set forth.

No. 27,346.—JAMES LAWRENCE BUTLER, WILLIAM S. HOSFORD, and D. WALTER SMITH, of Brooklyn, N. Y.—*Improvement in Burners of Vapor Lamps*.—Patent dated March 6, 1860. The tube of the jacket A is made of thin brass or copper, the portion *a a* being expanded outwardly, so as to receive the shank of the heater, when the jacket is received on the burner tube *c*. The shank pieces of B, in this case, are kept in place by the pressure of the burner tube on the inside and by expansion *a* on the outside.

Claim.—The construction of the adjustable thimble or jacket A A, with expansions or ears *a a*, and the adaptation thereto of removable heaters B B, for the purpose set forth.

No. 27,347.—JOSHUA F. CAMERON, of Livingston, Mo.—*Improvement in Shovel Ploughs*.—Patent dated March 6, 1860.—In the drawing, A represents the beam of the plough; B the standard, whose curve is the arc of a circle, having its anterior edge made of an oval form to admit the turning of the face of the shovel inward or outward; C is the shovel curved like the standard B, attached to the latter by means of a hinge screw D, and is prevented from sliding by the rods E E passing through the standard; F F are set screws, working through nuts inserted in the standard.

Claim.—The arrangement of the beam A, standard B, shovel C, hinge screw D, rods E E, and set screws or pivots F F, as described, for the purposes set forth.

No. 27,348.—WILLIAM B. CARGILL, of Waterbury, Conn.—*Improvement in Hand Cotton Pickers*.—Patent dated March 6, 1860.—The nature of this invention is explained by the claim and engravings.

The inventor says: I *claim* the reciprocating gatherer, arranged and operating substantially as described, whereby I am enabled to keep steadily in contact with the balls the said gatherer for extracting the cotton, as set forth and specified.

I also claim in the combination with the reciprocating gatherer, the stationary stripper for discharging the cotton from the said gatherer, as set forth and specified.

I also claim widening that portion of the gatherer which is always in the case for the more perfect delivery of the cotton to the receptacle, and to prevent clogging within the case, as set forth and specified.

No. 27,349.—LUCIUS CARRIER, of East Douglass, Mass.—*Improvement in Knife Handles*.—Patent dated March 6, 1860.—The strips of horn *a a b b* extend the whole length of the handle, and they are covered by a piece of horn *d*, which is bent around said pieces and is secured thereto by bolts *e*, a necessary number of which pass through the tang *c*, and not only secure the cover *d* to the body or filling of the handle, but also secure the handle to the tang.

Claim.—As an improved article of manufacture, a knife handle formed of a body or filling of horn, wood, or other suitable material, secured by a single piece of horn, substantially as described.

No. 27,350.—N. R. CARRINGTON, of Cold Water, Miss.—*Improvement in Seed Planters*.—Patent dated March 6, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination and arrangement of the seeding wheel H, constructed as described, the projecting arms *d d* alternating in action on the opposite sides of said seeding wheel, and the tangential sliding gate I, substantially as specified, and in combination therewith the false floor L, for adapting the variations of the seeding wheel to different kinds of seed, as set forth.

No. 27,351.—AUGUSTUS CONRADT, of Philadelphia, Pa.—*Improvement in Forming Hollow Articles of Sheet Metal.*—Patent dated March 6, 1860.—This invention consists in the construction of an apparatus for forming up the angular or prismoidal and other shaped hollow ornamental or useful articles (deviating in their circumferences from the circular form) of sheet metal, by the process of spinning.

The inventor says: I *claim* causing the mandrel A, whilst rotating, to vibrate or move laterally, under the combined influence of the governor *l*, pattern C, and springs *i i*, or their substantial equivalents, in the manner and for the purpose set forth and described.

I also claim giving the said mandrel A, whilst rotating, a longitudinal motion, when required, by means of the governor *l*, pattern C, and spring *f*, or their equivalents, substantially as and for the purpose set forth and described.

No. 27,352.—B. F. CARRIER, of Bath, Me.—*Improvement in Machines for Cutting up Cotton Plants.*—Patent dated March 6, 1860.—This invention consists in a machine for cutting the cotton stubble into short pieces and for pulling up the roots or stumps of the plants and dropping them in rows on the ground, so that they may be readily turned under by the plough.

Claim.—The revolving knives or cutters *i* and the pulleys *n p*, with their band *o*, operating substantially as described for the purpose specified.

No. 27,353.—JAMES C. DAMAN, of Hartford, Conn.—*Improvement in Machines for Extracting Stumps.*—Patent dated March 6, 1860.—This invention consists in the employment or use of two rack bars, fitted in a suitable framing, and used in connection with sliding catches, and a lever or levers, whereby the work of drawing stumps from the earth may be effected by a single person.

Claim.—The arrangement and combination of the connecting bar C D, the rod *i*, sliding frames F G, springs *h j*, link I, and lever H, as and for the purpose shown and described.

No. 27,354.—HENRY DISSTON, of Philadelphia, Pa.—*Improved Method of Securing Handles on Hand Saws.*—Patent dated March 6, 1860.—This invention consists in attaching the blade of a hand saw to the handle by means of taper pins screwed at the ends and furnished with nuts, so that when the blade, by constant or excessive strains, becomes loose in the handle, it may be readily tightened.

Claim.—The application of the taper pins *e e*, with the screwed ends and their nuts *f*, to the manufacture of hand saws, in the manner and for the purpose set forth.

No. 27,355.—H. WILLIAM DOPP, of Buffalo, N. Y.—*Improvement in Steam Engines.*—Patent dated March 6, 1860.—This invention consists in providing the valve balance with a piston or packing, said valve balance being stationary, but so arranged that it may, by the action of the steam, be kept in contact with the valves, and a variable cut off, which consists of a cam groove, to disconnect the valves from their respective motions.

The inventor says: I *claim*, first, the stationary valve balance B, constructed as described, in combination with steam valves A A, or their equivalents.

Second. I claim sliding valves A A, when the same are constructed and used in the manner and for the purpose set forth.

Third. I claim the employment of link, crank, or arm, as shown by link *k*, in combination with pistons M M and valves A A, as constructed.

Fourth. I claim the combined rocking valve gear, when the same shall be constructed substantially as and for the purpose set forth.

Fifth. I claim the employment of a cam groove around the shaft J, in combination with hooks *k k*.

No. 27,356.—DARWIN P. FLINN and RICHARD S. HAYES, of Le Roy, N. Y.—*Improvement in Corn and Cane Harvesters.*—Patent dated March 6, 1860.—This invention consists in the manner of gathering and presenting the stalks to the cutters, and also of conveying the stalks to rotary and intermittingly moving platforms, whereby the stalks are gathered and cut into gavels, and bound by an attendant, and cast from the machine as it moves along.

The inventors say: We *claim*, first, the employment or use of the shafts *f*, provided with the spiral wires E, and the shafts *h h*¹, provided respectively with the spiral wires F, and cylinder *i*, in connection with cutters H, arranged to operate substantially as and for the purpose set forth.

Second. The stationary and yielding fingers $l l^1$, in connection with the shafts $f h h^1$, provided with the spiral wires and cylinders, arranged for joint operation, as set forth.

Third. The movable platforms $I I$, provided with the rotary beds a , in connection with the fingers $l l^1$, or an equivalent stalk holding device, for the purpose specified.

No. 27,357.—JOSEPH W. GARDNER, of Shelburne Falls, Mass.—*Improvement in Table Cutlery*.—Patent dated March 6, 1860.—The claim and engravings explain the nature of this invention.

Claim.—An improved manufacture of knife or fork as made not only with a flat or sheet metal shank A , and with the scales $C C$ applied on opposite sides thereof, but with two separate semi-bolsters D applied relatively to the shank and scales and fastened thereto, substantially as specified.

No. 27,358.—WILLIAM M. GAREE, of Granville, Ohio.—*Improvement in Corn Planters*.—Patent dated March 6, 1860.—The hopper l^2 having been filled with corn, and the handles $j j$ being extended, the operator closes the handles, which movement fills the charger. The handles are then opened, by which the seed contained in the charger are caused to fall into the chamber $l l$, at the same time the jaws at the bottom are tightly closed and ready for entrance into the earth. The jaws are then thrust into the earth and the handles closed, by which movement the seed in the chamber $l l$ are allowed to fall into the earth, and the charger m is again filled.

Claim.—The arrangement of the flanch C , seed slide or charger m , plate n , brush block e , chamber $l l$, uprights $1 2 3$, lid p , and jaws $b b$, as and for the purpose shown and described.

No. 27,359.—EDWARD W. GORDON, of New York, N. Y., and WILLIAM H. PECKHAM, of Hoboken, N. J.—*Improved Spectacle Temples*.—Patent dated March 6, 1860.—This invention consists in providing spring stops $e i$, which act not only to arrest and determine the movement of the slide d , but also to render said slide uniform in its movement.

Claim.—Constructing the hollow temples and slides of spectacles with both of the spring stops $e i$, substantially as and for the purposes specified.

No. 27,360.—H. GORTNER and J. McCANN, of Nashport, Ohio.—*Improvement in Corn Harvesters*.—Patent dated March 6, 1860.—This invention consists in the employment of a peculiarly shaped rotary cutter, for giving an oblique draw cut, and operated by the driving wheel; and also in a platform H for receiving the stalks as they are cut by the knives, and discharge the same at one side of the machine in a suitable condition for binding in shocks.

The inventors say: We *claim*, first, the hinged frames $G G^1$ and H , bend c , roller D , with cords F , all arranged, combined, and operating in the manner and for the purposes set forth.

Second. We claim the convex knife rest N , with rotary sickle blade cutters L , as represented and described, for the purpose specified.

No. 27,361.—JOHN H. GOVE, of San Francisco, Cal.—*Improvement in Hay Presses*.—Patent dated March 6, 1860.—The nature of this invention is explained by the claim and engravings.

The inventor says: I *claim* the cross arms or levers $F F$, working in journals upon a movable platform at one end, in connection with the chains or ropes $c c$, one end of which is attached to the cross bars $H H$, the other fastened to and winding upon a shaft a .

I claim the arm n of lever m , combined with catch springs o , as arranged with the cross bar H , for the purpose of automatically disconnecting the pressing gear at the proper time, as set forth.

I claim the sliding bar r , with the hooks $s s$, roller t , and spring V , for the purpose of releasing the rope or wire, as set forth.

I claim the combination of the shaft a , chains or ropes $c c$, and arms or levers $F F$, when operated by the axle of a carriage, substantially as described, and for the uses and purposes as set forth.

No. 27,362.—JOHN R. GRACE, of Brooklyn, N. Y.—*Improved Surf Life Boat*.—Patent dated March 6, 1860.—The nature of this invention is explained by the claim and engravings.

The inventor says: I *claim*, first, the employment of a central ballast chamber c , when combined with two air chambers b , substantially as shown and described.

Second. I claim the combination of the air chambers $g g$, with the ends of boats that are so curved that when the boat is capsized the boat shall be mainly supported upon said air chambers, as and for the purpose shown and described.

Third. I claim the vertical and endwise arching of the chambers $g g$, as and for the purpose set forth.

No. 27,363.—W. W. GREEN, of Chelsea, Ill.—*Improvement in Cultivators*.—Patent dated March 6, 1860.—This invention consists in the arrangement for elevating and depressing

the shares, so that the same may when in operation be made to penetrate the earth at a greater or less depth as circumstances may require.

The inventor says: I *claim*, first, having the wheels *c c* of the implement attached to vertical perforated bars *g g*, which pass loosely through the back part of the frame *A*, in connection with the adjustable draught pole *B*, the whole being arranged as and for the purposes set forth.

Second. Attaching the shares *D* to their standards *j*, by means of the sockets *l*, plates *q*, and bolts *n*, the sockets and plates being attached respectively to the shares and standards, and the bolts passing through the sockets, plates, and standards, the bolts passing through transverse slots *m*, in the sockets and projections *r*, on the plates, the whole being arranged as and for the purpose set forth.

No. 27,364.—GEORGE W. GRAEBER, BENJAMIN F. COWAN, and A. C. WURZBACH, of Memphis, Tenn.—*Improved Gauge for Steam Boilers*.—Patent dated March 6, 1860.—This invention consists in a system of valves and passages by which steam is admitted to act upon a whistle or other device to sound an alarm in case of the water getting too low, or the pressure of steam too high in a boiler.

Claim.—The arrangement of the hollow water alarm valve *L* and its seat *k* and passages *n l m*, in combination with the chambers *C* and *D* and steam alarm valve *k*, substantially as described, to form separate means of communication with the same whistle, or its equivalent, for the water and steam alarms.

No. 27,365.—HEMAN B. HAMMON, of Bristolville, Ohio.—*Improvement in Hand Corn Planters*.—Patent dated March 6, 1860.—This machine is operated by simply taking it by the handles and striking the point into the ground the proper depth, the sliding front is then drawn up, which causes the lid *D* to open and allow the deposit of seed, then by pushing the sliding front down the lid is closed and the seed pressed into the side of the hill, and at the same time carries a charge of seed from the seed chamber ready for the next hill.

Claim.—The arrangement of the seed box *A*, sliding front *B*, back *C*, lid *D*, mouthpiece *E*, handles *F* and *G*, gauge *e*, set screw *n*, clasps *a¹ a² a³ a⁴*, the crooked finger *9*, branch *7*, pins *X X*, the flaring mouth *f*, channel *t*, measuring cavity *i*, brush *r*, for joint operation, as described, for the purpose specified.

No. 27,366.—A. B. JOHNSON, of Washington, Ia.—*Improvement in Horse Hay Rakes*.—Patent dated March 6, 1860.—This invention consists in the employment of a double rake, hung upon a suitable frame or arms which are to be secured to the wheels and axle of a wagon, and capable of turning in its bearings in said frame.

Claim.—The combination of the lever *J*, pawl *K*, wheels *I* and *H*, and stop pawl *L*, in combination with a double rake, arranged and operating in the manner set forth.

No. 27,367.—JASPER JOHNSON, of Geneseo, N. Y.—*Improved Gate*.—Patent dated March 6, 1860.—The turning of the pulley *p* raises and lowers the rod *R*, between the guides *a a¹*, and by the pressure of said rod against the guides in this movement causes the gate to turn upon its hinges and open or close as the case may be.

Claim.—The combination of rod *R*, guides *a a¹*, pulley *p*, and weighted cords *c*, with the gate and posts arranged and operating substantially as described.

No. 27,368.—DANIEL KAUFMAN, of Boiling Spring, Pa.—*Improvement in Hog Elevators*.—Patent dated March 6, 1860.—On the top of the post or upright *A*, there is secured a revolving cap *C*, and to this cap two short uprights *b b* are attached, which have a shaft *c* fitted between them. On this shaft *c* a lever *D* is placed, the former serving as a fulcrum for the latter.

Claim.—The post or upright *A*, provided with the radial bars *a*, in connection with the revolving cap *C*, with lever *D* attached, the whole being arranged, as shown, to form a new and useful device, for the purpose specified.

No. 27,369.—GEORGE W. KEENE, of Lynn, Mass.—*Improvement in Boot and Shoe Heels*.—Patent dated March 6, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Uniting the top lift *f* of a boot or shoe heel to the body *A* of said heel by means of an interposed metal plate *c*, having points or projections on both of its sides, which enter the top lift and the body of the heel, and thus secure itself to the top lift and the body of the heel, and each to the other, substantially as described, for the purpose specified.

No. 27,370.—JAMES W. LYON, of Brooklyn, N. Y.—*Improved Machine for Finishing Plugs of Stopcocks*.—Patent dated March 6, 1860.—A detailed description of this invention would require too much space to be given here. The claim and engravings will give an idea of the nature of the invention.

The inventor says: I *claim*, first, constructing the main bearing surface of a lathe spindle entirely of sharp W grooves, substantially as described.

Second. In combination with a lathe spindle and belt shipper, the friction brake B⁴, substantially as described.

Third. In combination with the chuck, the pins C⁶, slots C⁷, and adjusting screws C⁸, substantially as described.

Fourth. The arrangement, in combination with the machine, of the sliding carriage D, substantially as described.

Fifth. The arrangement, in combination with the machine, of the system of levers F¹ F², in connection with the treadle and reacting spring, substantially as described.

Sixth. The arrangement of the parallel mandrils G⁴ G⁵, in combination with the spindle and chuck, and carrying a cutting and tapping tool, substantially as described.

Seventh. The arrangement and mode of adjusting the different parts of the cutting tool H, substantially as described.

Eighth. The two slide rests I² I³, in combination with each other and with the machine, substantially as described, and substantially for the purposes set forth.

Ninth. In combination with the spindle, brake, and lever, operating the belt shipper, the arrangement of the vibrating arm and rotating cutters, substantially as described.

Tenth. The combination of the vibrating arm with the sliding carriage.

Eleventh. The hinged hand rest, in combination with the spindle and bed A, substantially as described.

Twelfth. The combination of the hinged hand rest with the sliding carriage and treadle lever, substantially as described.

Thirteenth. The arrangement of the internal mandrel and drill, in combination with the spindle and chuck, substantially as described.

Fourteenth. The combination of the internal mandrel and drill with the black slide rest, substantially as described.

Fifteenth. And finally, I *claim*, in connection with a spindle and chuck suitable for holding the cast plug, and so arranged with relation to the motive power as to be rotated in reverse directions or be held firmly in a fixed position, the cutting tool H and tap, the cutting tools I I¹, and the vibrating rotating cutter or cutters, or their equivalents, when arranged substantially as described, so as to successively perform their respective parts of the operation of finishing the plug without removing it from the chuck and to repeat their operations upon each successive plug, substantially as described.

No. 27,371.—JOHN MAGEE, of Lawrence, Mass.—*Improvement in Coffee Pots*.—Patent dated March 6, 1860.—In the drawings, E is a thumb lever, with a fulcrum H, by the use of which the piston F is moved up and down in a cylinder open at both ends K O, with two openings L N in the side next to the nose of the tea pot; the spring P is to draw the piston down and to keep the cylinder closed at the lower end, at all times, except when the thumb power is applied to the lever E.

Claim.—The use of the piston F and openings in cylinder, as applied to tea and coffee pots, for the purposes described.

No. 27,372.—EDWARD MATTOCKS, of Lyndon, Vt.—*Improved Shutter Operator*.—Patent dated March 6, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The described application of the lever U to the lever or bar C, and its arrangement with reference to the sectoral gear E and the pinion G, whereby, by the revolution of the said pinion, the blind may be not only either opened or closed, but latched or unlatched, in manner as set forth.

No. 27,373.—HAZAEI MAYHEW, JR., and ENOCH MAYHEW, of Lancaster, Pa.—*Improvement in Preparing Coal*.—Patent dated March 6, 1860.—This invention consists in the manner of preparing coal by the use of an air tight coal bin, in which coal is boiled or steamed, by being attached to an ordinary steam boiler having a steam pipe extending through a fire into the coal bin, so that coal can be made of a better quality by thus bringing it into contact with hydrogen.

Claim.—Making coal better in quality by bringing it into contact with hydrogen, by the mode and manner specified.

No. 27,374.—JAMES D. MOORE, of Zanesville, Ohio.—*Improvement in Self Loading Fire Arms*.—Patent dated March 6, 1860.—This invention consists in the manner of arranging the magazines in relation to the barrel or chamber of the gun, so that the chamber may receive its loose powder and ball charge, convey it into the proper position for discharging the piece, and cutting off the fire of the discharge from the magazine of the powder, to prevent it from igniting or exploding.

The inventor says: I *claim*, in combination with a carrying and cut-off plate C, the mova-

ble and stationary magazines *a b*, for containing loose powder and balls or short cartridges, and operating together substantially as described.

I also claim, in combination with a semi-rotating breech piece *H*, the plate *C* and magazines *a b*, substantially as described.

I also claim the combination of the cam plate *G* and lever *I*, for actuating the slide plate *C* at proper intervals, as set forth.

I also claim so connecting the dog with the bolt *c* as that the hammer will not catch or stand at full cock, unless the bolt is in its proper position to lock the breech and barrel in line, substantially as described.

No. 27,375.—CHARLES GUSTAVE MUELLER, of New York, N. Y.—*Composition for Extinguishing Fires*.—Patent dated March 6, 1860.—This invention is to produce a composition which, by the quantity of non-combustible gases emanating from it when lighted, will serve to extinguish fires in rooms which are partially or entirely closed.

Claim.—The described composition of charcoal, sulphur, nitre, sugar, and red lead, mixed together in the proportions specified, for the purpose of extinguishing fires.

No. 27,376.—JIMPSEY B. NETHERLAND, near Louisville, Ga.—*Improvement in Cultivators*.—Patent dated March 6, 1860.—The lower extremities of the standards *B C* have points entering recesses of corresponding size and shape in the rear sides of the shovels or ploughs which are attached to them. The upper extremities of the standards are provided with two or more bolt holes, for the purpose of adjusting their position according to the character of the work to be done.

Claim.—The arrangement of the peculiarly shaped branched standards *B C*, constructed as described, in combination with blades or shovels, constructed as described, and attached to the standards in the manner specified.

No. 27,377.—DAVID NEWBROUGH, of Clarksburgh, Ind.—*Improved Churn*.—Patent dated March 6, 1860.—The cream being placed in the barrel *A*, the operator takes hold of the handle *O* and elevates that end to an angle of forty degrees, the barrel bearing its weight upon the frame *E* at the point *D*; then drops the elevated end so as to raise the other to an equal altitude. This motion is repeated in quick succession until the process of churning is completed.

Claim.—A churn, constructed substantially as described and specified, that is to say, with a cream receptacle *A*, brakes *F* and *H*, with gatherer *Q*, when these several parts are constructed and arranged for operation conjointly as and for the purposes described.

No. 27,378.—JOHN J. PAXSON, of Middletown, Ind.—*Improvement in Cultivators*.—Patent dated March 6, 1860.—This invention consists in attaching to a cultivator frame a seed distributing device, composed of a reciprocating slide fitted within a suitable seed box, provided with a cut-off, and operated by cranks and connecting rods from the shaft of a driving roller which is fitted to an elastic adjustable frame attached to the cultivator frame.

Claim.—The attaching of the roller or wheel *F* to an elastic frame *C* connected to the cultivator frame *A* by a bolt *h*, and communicating motion to the slide *F* from the shaft or axle *D* by means of cranks *l l* and connecting rods *m m*, attached to the ends of the pivotted bar *n* on the slide *F*, the whole being arranged as and for the purpose set forth.

No. 27,379.—WORDEN P. PENN, of Belleville, Ill.—*Improvement in Seeding Machines*.—Patent dated March 6, 1860.—In each of the hoppers *J* and *I* a false bottom *D D¹* is placed, closely upon the partitions *F*; in each of these false bottoms, holes are cut at *T T¹*, over the wheels *B* and *O*, to correspond with the holes *u* and *n*; upon one end of the stops *e* and *f*, chain pulleys *d d¹* are fixed, driven by means of a chain *P* leading from the wheel *b* upon the main axle *c*.

Claim.—The arrangement of the hoppers *J* and *I*, compartments *R*, partitions *F*, the false bottoms *D* and *D¹*, shafts *E* and *F*, feeding wheels *B* and *O*, all constructed and operated as described.

No. 27,380.—GEORGE W. PHENIX, of New Brunswick, N. J.—*Improved Washing Machine*.—Patent dated March 6, 1860.—This invention consists in providing inclined planes at the top and bottom upon the rollers attached by a ledge to the outside washboard to rest and travel, which said rollers travel up the inclined planes and are forced apart by the clothes, arranged in the usual way in the centre washboard and dasher, and come together again by the gravity of their own weight and the force of the springs in their travel down the planes.

Claim.—The inclined planes *J J J J*, spiral springs *n n*, with the rollers and washboards to produce friction in washing, and in combination with levers or treadles *m m*, as and for the purposes described.

No. 27,381.—JOHN T. PLASS, of New York, N. Y.—*Improvement in Slide Valves of Steam Engines*.—Patent dated March 6, 1860.—This invention consists in the employment of a follower fitted to a stuffing box in the back of the steam chest, and held against the back of the valve by a set screw, with an interposed spring, in such manner as to prevent the action of the steam on the back of the valve to a greater extent than may be desired.

The inventor says: I *claim*, first, the arrangement, in connection with the follower C, of the cup *f*, spring G, gland E, and exterior adjusting screw *f*, as and for the purpose shown and described.

Second. The combination of the stuffing box D with the follower C and gland E, as and for the purpose shown and described.

Third. The combination of the openings *h h* in the follower C, with the openings *i i* in the gland E, as shown, so that any steam which escapes under the force of the valve, will find exit to the atmosphere, and thus notify the attendant of the leakage and enable him to regulate the adjustment of the valve accordingly.

No. 27,382.—HUNTINGTON PORTER, of Cummington, N. H.—*Improvement in Hoes*.—Patent dated March 6, 1860.—A is a curved portion of the hoe, which is continued out by two wings B B, terminating in sharp points; the socket C for attaching the hoe to the handle is on top of the hoe and between the two wings B B.

Claim.—The arrangement of the peculiarly curved and pointed wings B, socket C, and round blade A, as and for the purposes shown and described.

No. 27,383.—ROBERT PRICE, of New York, N. Y.—*Improved Combination of Mop and Scrubber*.—Patent dated March 6, 1860.—This invention consists in constructing a mop and scrubber in such a manner so as to attach the mop and brush to the same handle and detach either at pleasure, to enable the mop to be wrung without touching it with the hands.

Claim.—Constructing the handle A and cloth frame D in such a manner, as described, so as to attach to said handle and frame a scrubbing brush and to the wringing rod a mopcloth, for purposes specified, or any other construction substantially the same, or effecting the same facilities to accomplish the same end.

No. 27,384.—GEORGE W. RAINS, of Newburgh, N. Y.—*Improvement in Slide Valves of Steam Engines*.—Patent dated March 6, 1860.—This invention consists in the manner of supporting the slide valve or valves of a steam engine by means of a carriage running on rollers upon the valve seat, or on a face parallel therewith, whereby the valve is relieved of unnecessary pressure and friction.

Claim.—The combination of the suspended valve A A¹ with the carriage B, and rollers *c*, as and for the purpose shown and described.

No. 27,385.—JOHN R. ROGERS, of Sacramento, Cal.—*Improvement in Centrifugal Seeding Machines*.—Patent dated March 6, 1860.—In using this machine, the operator moves the slide *c*, by the lever I, and the rod J, so as to allow a sufficient quantity of grain to fall through upon the wheel F, and walking forward gives the rod H a backward and forward motion at each step, the grain falling upon the wheel F is thrown off violently, and distributed over the ground.

The inventor says: I *claim*, first, the arrangement of the rod H and the cord *a*, in connection with the shaft E and wheel F, the same being used in the manner and for the purpose specified.

Second. I also claim the arrangement of the shaft E with the slotted seed slide C, shaker *c*, lever I, and rod J, in the manner and for the purpose set forth.

No. 27,386.—SAMUEL P. RUFF, of Weaver's Old Stand, Pa.—*Improvement in Mill Spindles*.—Patent dated March 6, 1860.—This invention consists in arranging the vertical shafts of mills, water wheels, &c., so that all their points of bearing shall come in contact with rolling or anti-friction surfaces.

Claim.—The arrangement, consisting of a vertical shaft C *h i j*, grooved plates or blocks *c d B w v*, friction roller frames D E F *o*, friction rollers *l m n*, and axial pin *g*, the whole constructed and used together in the manner and for the purpose described.

No. 27,387.—MARK RUNKEL, of New York, N. Y.—*Improvement in Oscillating Steam Engines*.—Patent dated March 6, 1860.—This invention consists in arranging a cylindrical piston, with two projections, in a cylindrical shell, or cylinder with two abutments *a a*, and furnished with four ports *c c¹ c c¹*, two on each side, which are governed by two slide valves I, operated from the same eccentric, so that the steam acts on the piston C¹ simultaneously on both sides, thus giving the double power, and balancing the pressure on the shaft or piston rod C.

Claim.—The arrangement of the oscillating cylindrical piston C¹, or its equivalent, in com-

bination with the stationary cylinder A, or its equivalent, constructed and operating substantially in the manner and for the purpose specified.

No. 27,388.—THADDEUS S. SCOVILLE, of New York, N. Y.—*Improvement in Cultivators*.—Patent dated March 6, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement and combination of the side beams A A hinged together, the jointed bar *a* connecting the thills, the spur wheels D D D D, acting both as cultivators and supporters, the convertible cultivating teeth E E, and the sliding or self-adjusting seat G, substantially in the manner and for the purpose specified.

No. 27,389.—JOHN ADAM SCHEUTZ, of St. Louis, Mo.—*Improvement in Anti-rheumatic Liniments*.—Patent dated March 6, 1860.—The inventor says: Take one half of an ounce of the spirits of turpentine, one half of an ounce of the spirits of hartshorn, one fourth of an ounce of formic acid, one quarter of an ounce of stone oil, one quarter of an ounce of lard oil, one quarter of an ounce of fir nut oil, and mix them well together, and apply the mixture externally to the parts affected.

Claim.—The compound composed of the afore mentioned ingredients.

No. 27,390.—JAMES SELBY, of Peoria, Ill.—*Improvement in Seed Drills*—Patent dated March 6, 1860.—The shaft B has its bearings in either end of the seed box, and is provided with serrated wheels C, which revolve into or through the discharge openings in the bottom of the seed box. The wheel C is provided with a series of radial cavities *a* on one side, and a flange *b* on the opposite side. The sliding valve *f* is operated by the cam E, to close and uncloze the discharge opening *c*.

Claim.—The arrangement of the shaft B, serrated wheel C, slide *f*, bar F, and cam lever E, when the same are used substantially as and for the purpose specified.

No. 27,391.—HAMILTON E. SMITH, of Philadelphia, Pa.—*Improved Washing Machine*.—Patent dated March 6, 1860.—The pounding of the inner reel or roller C on the clothes has the effect of forcing the water contained in the folds through the interstices of the fabric, and through perforations between the slats of the revolving reel into the outer vessel or reservoir, and the latter may serve as a receptacle for the heavy particles of dirt which are thus prevented from returning to the folds.

The inventor says: I *claim* the slotted or perforated reel C, having any convenient number of straight sides when the said reel is arranged to revolve within the water contained in the outer vessel A, and when it operates in conjunction with the weighted reel or roller D, as and for the purposes set forth.

I also claim the heater P, with the coiled pipe F, or its equivalent, when combined with the outer casing A, and the reels C and D, in the manner and for the purpose specified.

No. 27,392.—GEORGE K. SNOW, of Watertown, Mass.—*Machine for Folding and Pasting Paper*.—Patent dated March 6, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* a machine or combination consisting not only of mechanism for producing a single folding of a sheet of paper, but mechanism which shall operate to produce either one or two further and parallel folds or turns of such paper in an opposite direction, substantially as specified; such mechanism, as shown in the drawings, being the plates G H C D and E, arranged and made to operate together essentially in the manner and by means as hereinbefore set forth.

And I also claim a combination consisting not only of mechanism for folding a sheet of paper once, and mechanism for producing one or more further parallel folds or turns of the sheet in an opposite direction, but mechanism which shall operate to produce either one, two, or three folds of the sheet at a right or other angle with the line or lines of previous foldings of it; such combination of mechanism as exhibited in the drawings being the plates G H C D C¹ D¹ E N O and R, operated in the manner and by means substantially as heretofore described.

I also claim a combination or machine consisting not only of mechanism for folding a sheet of paper one or more times, but mechanism for applying paste or cement on such part or parts of the sheet as may be required, in order to cause the sheet to stick together at any two or more of its folds or lines of fold; the mechanism shown in the drawings for applying paste being the paste roller *s*², paste fountain *t*², and the wheel *y*², arranged and operated relatively to the platform B and the folding plates, substantially as explained.

And in combination with the receiving trough or spout S and the sheet abutment U, I claim the mechanism or frame W for receiving the sheet from the abutment and conveying it toward, and pressing it upon, either the pack or packholder that may be within the trough S.

And in connection with the receiving and conveying apparatus or frame W, applied to the

trough S and its abutment U, as described, I claim the application to the abutment of a carriage V, and a hand lever Z, or any equivalent mechanism by which such abutment may be moved in a direction away from the sheet receiver, so as to enable the latter to expel from the machine an imperfect sheet, or an imperfectly folded sheet, essentially as specified.

I also claim the arrangement and combination, in the manner described, of the adjustable stop bar o^2 , with the two folding plates G H, and the plate E, to run between them.

I also claim, in combination with a paper-folding machine, constructed so as to fold paper or fold and apply paste to it, substantially as described, a heating apparatus so applied as to heat a pack of folded paper while in the machine, the same being to facilitate the desiccation of the pack or paste applied thereto, for the purpose set forth.

I also claim, in a paper-folding machine, the combination of the lifter bar g^2 with the register points f^2 , applied to the platform upon which the sheet to be folded is placed.

And I also claim the combination of the slotted plate or bearer h^3 , or its equivalent, with a folding plate and a pasting apparatus of the paper-folding machine; the same being to prevent a pasted part of a sheet from adhering to the outer surface of the folding plate.

No. 27,393.—C. M. SPENCER, of South Manchester, Conn.—*Improvement in Self-Loading Fire Arms*.—Patent dated March 6, 1860.—This invention consists in an improved mode of locking the movable breech of a breech loading fire arm, whereby it is easily opened and closed, and very firmly secured in place during the explosion of the charge; and also in certain contrivances operating in combination with the movable breech, for the purpose of withdrawing the cases of the exploded cartridges from the chamber of the barrel and for conducting new cartridges thereinto from a magazine in the stock.

The inventor says: I claim, first, the combination of the rolling breech E, the lever G, and sliding locking bolt F, the whole fitted and applied substantially as set forth.

Second. The slide H, applied to the rolling breech and operating in combination with the hammer, substantially as and for the purpose specified.

Third. The combination of the serrated projection $n m$, the rolling breech, and the tongue J, applied and operating substantially as described within the opening in the breech supporter.

No. 27,394.—THOMAS STEWART, of Philadelphia, Pa.—*Improvement in Slide Valves of Steam Engines*.—Patent dated March 6, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The elastic or yielding diaphragm I, attached to the balance frame H, and to the steam chest, and arranged in the manner set forth, when the said diaphragm has such an extent of its upper surface exposed to the pressure of steam that while the latter maintains the balance frame in close steam tight contact with the valve, the said valve is relieved in a great measure from the pressure of steam, as specified.

No. 27,395.—GRAY UTLEY, of Chapel Hill, N. C.—*Improved Head Rest for Travellers in Railroad Cars, Carriages, &c.*—Patent dated March 6, 1860.—The nature of this invention is explained by the claim and engravings.

Claim.—The rest H, supported by the shoulders of the wearer and having terminations for supporting the wearer's arms, so that the weight thereof shall counteract the pressure of the head against the said rest, substantially as set forth.

No. 27,396.—AARON C. VAUGHN, of Johnstown, Pa.—*Improved Churn Dasher*.—Patent dated March 6, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Arranging the shafts of a series of revolving churn dashers B, C, D, longitudinally in the churn box A, and connecting them by means of cogged wheels or other mechanical equivalents, when the latter are arranged inside of the churn box and rotate each adjacent pair of dashers in contrary directions, as shown, and when the blades of the dashers in each series incline in contrary directions also, substantially in the manner and for the purposes described.

No. 27,397.—AARON C. VAUGHN, of Rainsburg, Pa.—*Improved Mortising Machine*.—Patent dated March 6, 1860.—This invention consists in cutting square or oblong mortises by the use of two hinged cutters m , that work towards each other, when cutting, and from each other, as they are raised or drawn back for each succeeding cut.

Claim.—Two nipper jaw cutters constructed and operating substantially as described, for the purpose of cutting a square or oblong mortise in the wood; and this I claim whether the cutters be operated or fed up to their work by the mechanical contrivances represented or by any others substantially the same.

No. 27,398.—NICHOLAS S. VEDDER, of Troy, N. Y.—*Improvement in Cooking Stoves*.—Patent dated March 6, 1860.—This invention consists in the arrangement of smoke flues

from the fire box B, along the top plate C, end plate or end plates $d d^1$, and bottom plate e , of the oven A, so as to heat the oven suitably for baking and roasting purposes, and at the same time having the door or doors $f f^1$ of the oven placed in the side or sides $g g^1$, directly opposite to the upright side or sides $h h^1$ of the fire box, in order that perfectly free and direct access may thereby be had to the highest and most roomy and useful part i of the oven.

Claim.—The arrangement of the door or doors $f f^1$ of the oven A, directly opposite to the side or sides $h h^1$ of the fire box, and of the most capacious and effective portion of the oven, as and for the purpose set forth, the smoke flues being extended from the fire box along the top c , end or ends $d d^1$, and bottom e of the oven, substantially as described.

No. 27,399.—J. M. WAMPLER, of Loudon County, Va.—*Improvement in Breech Loading Fire Arms.*—Patent dated March 6, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the double catch X and K, which holds down the breech and at the same time holds the rear end of the trigger guard, both being relieved by one pressure of the finger in the act of pulling down the guard to raise the breech for loading,

Second. The peculiar construction set forth whereby the percussion bar N is forced back and locked to a short half cock or safety catch I, sufficiently far to clear the cap, cartridge, or breech, this being done by the same pressure of the finger that frees the double catch and the trigger guard.

Third. The rock lever P, for freeing the percussion bar from its half cock at the instant of full cocking.

Fourth. The back sight Y, constructed and operated as described, for the purpose specified.

No. 27,400.—HENRY WATERMAN, of Haverhill, Mass.—*Improved Apparatus for Hoisting Water.*—Patent dated March 6, 1860.—This invention consists in combining, with a self-discharging bucket, a circular trough placed around the well curb, into which the bucket may discharge when raised to a sufficient height.

Claim.—The trough D, around the well curb, in combination with the self-discharging bucket H, when operated substantially as set forth.

No. 27,401.—E. D. WILLIAMS, of Philadelphia, Pa.—*Improvement in Solidified Fuel from Coal Dust.*—Patent dated March 6, 1860.—The claim will explain the nature of this invention.

Claim.—Compounding and preparing a solidified fuel from coal dust, peat, and other like substances, by mixing the same with glutinous paste, subjecting the composition to pressure in moulds, and subsequently drying the condensed blocks, as set forth.

No. 27,402.—F. O. WILSON, of Mount Olive, N. C.—*Improvement in Cultivators.*—Patent dated March 6, 1860.—As the two side ploughs loosen the earth at the roots of the corn or cotton, and destroy the weeds or grass, the double mould turn plough advances and fills up the furrows created and leaves a shallow furrow in the centre of the two rows.

Claim.—The double mould turn plough F, and the side turn ploughs H H, in combination with the beam A, middle stock E, cross frame D, and side stocks G G, when said beam A and middle stock E shall be braced and supported by the stay C, and the other parts constructed and arranged substantially as and for the purpose specified.

No. 27,403.—JOSEPH WOODRUFF, of Rahway, N. J.—*Improved Steam and Fire Regulator.*—Patent dated March 6, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the disks or diaphragms B and C, connected together so as to form a double diaphragm, constructed and operating substantially as set forth.

Second. The clamping rings D, when applied to diaphragms, for the purpose of making a steam or air tight joint.

Third. The concave cup or bearing G, for supporting the lower diaphragm, when about the size of the standard or bearing F.

Fourth. The hollow packing screw K, constructed as described, and operating in the manner set forth.

Fifth. The double adjustable clevis and yoke I, in combination with the standard F and lever H.

No. 27,404.—AUSTIN WOODFOLK, of Parish of Iberville, La.—*Improvement in Ditching Machines.*—Patent dated March 6, 1860.—The nature of this invention is explained by the claim and engravings.

The inventor says: I *claim*, first, the combination of the inclined excavator with an adjust-

able throat plate, or its equivalent, so arranged as to prevent the earth from breaking and deliver it in a sheet to the carrying band.

Second. In combination with the excavator, I claim the adjustable sloper jointed to the side of the excavating plough, substantially as described for the purpose set forth.

Third. In combination with the inclined excavator, I claim the continuous carrying band *G*, arranged across the end of the inclined plane and extending outside the same and at right angles thereto, to receive the earth, substantially as described.

Fourth. Arranging the joint pivot of the frame of the continuous carrying band extending across the end of the excavator, substantially as described, so as to prevent the inclination of the band being changed at the rear of the inclined excavator, when the inclination of the band is varied outside of the frame of the excavator.

Fifth. The combination of a carrying band with a pressure roller *e*, arranged substantially as described, to compress the earth on the band so as to form a continuous sheet, for the purpose set forth.

No. 27,405.—WILLIAM CHADWICK, of Bury, England, assignor to himself and WILLIAM GRIFFITHS, of Philadelphia, Pa.—*Improvement in Ventilators*.—Patent dated March 6, 1860; patented in England May 28, 1858.—*a* is the case to which are fixed the footstep *a*¹ and the bearing *a*¹, supporting the spindle *c*; to this spindle are fixed the vanes or worm *b* and the hood *i*, of the usual construction, having vanes and perforations.

Claim.—The combination of the spiral vanes or worms *d* with the screw vanes *b*, standard *c*, and case *a*, when the same are arranged without any partition between the vanes *d* and *b*, and without any casing around the vanes *d*, but in the manner and for the purpose specified.

No. 27,406.—ROBERT CRAIG, of State Line City, Ind., assignor to himself and J. D. LUDLOW, of said State Line City.—*Improvement in Cultivators*.—Patent dated March 6, 1860.—This invention consists in the employment of bevel keys, interposed between the feet of the implement and the shares, for the purpose of adjusting the latter in oblique positions to the right or left, so as to throw the earth outward from the implement or inward toward its centre, as circumstances may require.

Claim.—The employment or use of the curved bevel keys *F*, interposed between the shares and their feet, and secured by the same bolts *d* which attach the shares to the feet, as and for the purpose specified.

No. 27,407.—HENRY EASTMAN, of Indianapolis, Ind., assignor to D. HENDERSON, of said Indianapolis.—*Improvement in Horse Hay Rakes*.—Patent dated March 6, 1860.—In the drawings, *A* represents a series of heads, in which the teeth *P* are secured and fastened. To the under side of the axle *C* the three pieces *D*¹ *D*² *D*³ are hung by the use of hinges. To the platform *E* is attached the lever *B*, having the arm *F* extending forward at right angles with the lever, having the roller *G* fastened in the slotted end and working on the piece *D*¹, which is hung at right angles to the piece *D*³.

Claim.—The arrangement of the toothed rake heads *A* *P*, triangular frame *D*¹ *D*² *D*³, axle *C*, hand lever *B*, arm *F*, friction roller *G*, and catch *H*, substantially in the manner and for the purpose described.

No. 27,408.—W. A. FLANDERS, of Cleveland, Ohio, assignor to himself and T. W. BOYCE, of said Cleveland.—*Improvement in Bee Hives*.—Patent dated March 6, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim, first, the combination of the triangular reversible comb frame or comb frames *B* *B* and the angular adjustable case or chamber *A*, or their equivalents, arranged substantially in the manner and for the purposes set forth.

Second. I claim the mechanism or means arranged substantially as described, or their equivalents, by which I am enabled to adjust or place the embryo brood contained within the hive or in the frames above or nearly above the feeding swarm, in the manner and for the purposes specified.

Third. I claim the improvement in the comb guide, consisting of the wire saddle *D*, hooks *D*¹, and glass plate *D*², or their equivalents, constructed and applied in the manner and for the purposes specified.

Fourth. As an improvement in moth traps, I claim the hinged wings *O* *O*, in combination with the central inclined plane *N*, the several parts being constructed and arranged in the manner described, for the purposes set forth.

Fifth. I claim the drone separator *H*, provided with the passages *J* *J*, when used in combination with the wings *I* *I*, substantially as set forth, for the purposes specified.

No. 27,409.—GEORGE H. HORN, of Boston, Mass., assignor to himself and EDWIN B. HORN, of said Boston.—*Improvement in the Needle Holders of Sewing Machines*.—Patent dated March 6, 1860.—The nature of this invention is explained by the claim and engravings.

The inventor says: I *claim* my improved device or mechanism for holding and adjusting the needle, it being composed of the secondary socketed holder B and its ball e^1 and supporting socket, applied to the needle carrier, and having a device or devices for clamping the ball to the carrier, substantially as specified.

And in such I also claim making the ball needle holder with the split or slit in its ball, substantially as described, and so as to coöperate with the clamping screw or device, and cause it to clamp both the needle and the needle holder at one and the same time, as described.

No. 27,410.—GIBBONS L. KELTY, of New York, N. Y., and THOMAS G. HAROLD, of Brooklyn, N. Y., assignors to RICHARD H. KELTY, of New York city.—*Improved Curtain Fixture*.—Patent dated March 6, 1860.—The nature of this invention will be understood by the claim and engravings.

The inventors say: We *claim*, first, a head or centre pin d , on which the roller revolves, combined with the metallic bracket c , substantially as specified, whereby the roller is prevented from becoming disconnected by end motion to the roller or looseness of the bracket, as set forth.

Second. We claim the combination of the centre pin, provided with a head, with the spring g , that acts to draw the head of the centre pin to the bracket, as set forth.

Third. We claim confining the blind cord by means of two flat or nearly flat surfaces that are pressed towards each other by means of a spring, when one of those flat or nearly flat surfaces is stationary and the other is attached to the shade or curtain roller, whereby the said roller can be revolved or will remain in any position to which it may be turned, as specified.

No. 27,411.—WALTER J. F. LIDDELL, of Erie, Pa., assignor to himself and BENJAMIN HERSHEY, of said Erie.—*Improvement in Car Springs*.—Patent dated March 6, 1860.—The claim and engravings explain the nature of this invention.

Claim.—So connecting or suspending the yielding part of a car or carriage to the unyielding part thereof, by springs arranged vertically, as that the weight or force applied thereto shall elongate or extend said springs longitudinally, or in the direction of the applied force, and their removal allow the said springs to contract in that direction, substantially as described.

No. 27,412.—ALVIN R. PAINE, of New York, N. Y., assignor to JOHN M. MYERS, of said New York.—*Improvement in Sewing Machines*.—Patent dated March 6, 1860.—This invention consists of two clamping segments set within a rim or hub on the feed wheel, and acted on by a cam movement at the centre of the feed wheel in such a manner that the said feed wheel receives a motion due to the vibration of the lever carrying said cam.

The inventor says: I *claim*, first, the clamping segments $g g$ within the ring 1 of the feeding wheel, when said segments are formed with the flat side or removed portion at 2 2, for the purposes and as specified.

Second. I claim the combination of the vibrating lever h and segments $g g$, when the segments are formed with the cam shaped openings 3 3 at their centres, acted on by the block of the lever, in the manner and for the purposes specified.

No. 27,413.—SEPTIMUS C. STOKES, of Manchester, N. H., assignor to himself and BENJAMIN S. STOKES, of said Manchester.—*Improved Knife Sharpener*.—Patent dated March 6, 1860.—Between the two bars A B are arranged two guides F G, for properly guiding and supporting a knife while it is sharpened. They should be arranged apart from each other, as shown at a , each being made angular on its inner surface.

The inventor says: I *claim* the combination and arrangement of two cylindrical or other files or bars A B with a frame or holder C and a clamp, substantially as and for the purpose described.

And, in combination with the two rods or bars A and B and a frame or holder C, arranged with respect to each other substantially as specified, I claim the gauges or guides F G, arranged relatively to the said bars, essentially in manner and for the purpose as set forth.

I also claim the combination and arrangement of the projecting rest D with the two crossed bars A B and their holder C, provided with a handle, as specified.

No. 27,414.—HENRY WIGHT, of Cambridge, Mass., assignor to WILLIAM C. McCLORLAND, of Springfield, Mass.—*Improvement in Wooden Soled Shoes*.—Patent dated March 6, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The new manufacture of boot or shoe described, viz: a boot or shoe with a wooden sole, having the tops or upper fastened to the sole in a proper manner by pegs, nails, or screws passing through a portion of the wood of the sole and through the upper or edge of the top and into the wood work of the sole again, substantially as set forth.

No. 27,415.—**ETHAN ALLEN**, of Worcester, Mass.—*Improvement in Constructing Fire Arms*.—Patent dated March 13, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Making or forming notches or catches on cylinders of fire arms or other work, by pressing or cutting, or both, in the manner and for the purposes as set forth and described.

No. 27,416.—**EDWARD ANDREWS** and **JOHN H. CARR**, of Palo Alto, Pa.—*Improvement in Lubricating Journals*.—Patent dated March 13, 1860.—This invention consists in forming an air tight chamber to contain the lubricating material in the shaft or journal, the lubricating material being supplied to the bearings of the journals or shafts through a hole communicating from the air tight chamber to the outer surface or circumference of journals or shafts.

Claim.—The combination and arrangement of the air tight chamber A, tube B, valve C, spring H, and piston D, with small hole E, constructed and operated substantially as described.

No. 27,417.—**PETER BAILEY**, of Falls Township, Pa.—*Improvement in Grain Fans*.—Patent dated March 13, 1860.—This invention consists of certain coupled rods jointed to the stationary frame and to the shaker of an ordinary grain fan, arranged in respect to the sieve and to the inclined plane down which the grain and chaff pass to the sieve, and operating so as to agitate the grain and chaff as it falls from the inclined plane, and insuring such a thorough exposure of the chaff to the current of air as will facilitate its separation from the grain.

Claim.—The coupled rods D and G, and D¹ and G¹, jointed to the frame A and to the shaker B, arranged in respect to the inclined plane *b* and sieve *d*, and operating substantially as set forth.

No. 27,418.—**JOHN BALLOU**, of Cincinnati, Ohio.—*Improvement in Adding Machines*.—Patent dated March 13, 1860.—This invention relates to a peculiar construction of rings in which are combined the three features of a finger wheel, ratchet, and register.

Claim.—The construction of the rings C¹ C² C³, marked on their peripheries with numerals, substantially as and for the purposes set forth.

No. 27,419.—**JOHN W. BARCROFT**, of Friendship, Va.—*Improvement in Ditching Machine*.—Patent dated March 13, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination of buckets or scoops *b*, having hinged falling bottoms *d* with a guard E of such shape that it keeps the bottoms of the buckets from falling until the proper time for discharging the dirt which has been dug or scooped up, and then allows the bottoms to fall, and, after the discharge of dirt has taken place, raises the bottoms to their original position, ready for another digging or scooping operation.

Second. Combining the guard with the frame *a*, which carries the buckets by means of brackets *e* having friction rollers *f* suspended on them, substantially as and for the purposes set forth.

No. 27,420.—**BENJAMIN F. BARKER**, of Belfast, Me., and **ISAAC T. BARKER**, of Montville, Me.—*Improved Machine for Sawing Veneers spirally from the Log*.—Patent dated March 13, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A traversing carriage carrying the devices, substantially such as are described, for holding and rotating the block and feeding it to the saw, so as to saw it spirally from the periphery in toward the centre, substantially as described.

No. 27,421.—**CURRAN BATTLE**, of Warrenton, Ga.—*Improvement in Cotton Seed Planters*.—Patent dated March 13, 1860.—The engraving is a side view of the machine, showing all its parts; A is the seed box; *c c* the inclined bottom and front of the box; R the frame or bed on which the box rests; H the handles; B the wheels of the planter; N the saw toothed planting or feed wheel; S the toothed cylinder or rake, to keep the seed loose and bring them in front of the saw; P P the two cogged wheels, one on the axle of the planter and the other on the shaft of the toothed cylinder; C the plough to open the trenches; and O the coverer.

Claim.—The arrangement of the frame R, seed box A, wheels B, handles H, bottom *c c*, cog wheels P P, the saw toothed distributing wheel N, the toothed cylinder S, the plough C, and the coverer O, operating conjointly, as described, for the purposes specified.

No. 27,422.—**JOSHUA BILLS**, of Southington, Conn.—*Improved Sausage Machine*.—Patent dated March 13, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the spiral shaft J passing through the central slots *g* of the heads L, essentially in the manner and for the purposes fully set forth.

I also claim the cutting knife F united solidly to a metal bar G by its being cast thereon,

and forming a cavity H in the bottom of case A to receive the knife, and so position it by the single screw I, essentially in the manner and for the purpose fully set forth.

I also claim the forward end of the stuffer being concave at C², and the feeding end having a portion of its spiral wings removed at B² and inclined planes *m* inserted, essentially in the manner and for the purposes fully set forth.

I also claim the arrangement of the case A, the stuffer X, and its case W, so that both the cutter and stuffer may be operated in the same case, essentially in the manner and for the purposes fully set forth.

No. 27,423.—C. C. BOMBERGER, of West Carlisle, Pa.—*Improved Wind Wheel*.—Patent dated March 13, 1860.—This invention consists in the use of a cam actuated by a lever connected with a suitable governor, the cam being so arranged with slats composing the wings, that the slats will, as the wheel rotates, be closed to a greater or less extent at certain and necessary points of its rotation, in order to effect the desired end.

Claim.—The arrangement and combination, with the slats C, of the vertical connecting bars D, vertically moving cam E, and governing lever F, so that, as the motion of the wheel increases or diminishes, the lever F will correspondingly raise or lower the cam E and thus regulate the speed of the wheel, all as herein shown and described.

No. 27,424.—I. W. BOWERS, of Cincinnati, Ohio.—*Improvement in Railroad Chairs*.—Patent dated March 13, 1860.—This invention relates to the construction of curved lips or flanges of wrought iron railway chairs, by which greater strength is given in proportion to the weight of metal used, a greater surface allowed to bear upon the cross ties, and a better position afforded to the securing spikes.

Claim.—Providing wrought iron railroad chairs with the curved lips or flanges A¹ b, substantially as and for the purposes set forth.

No. 27,425.—C. P. BROCKETT, E. TODD, and JOHN BROCKETT, of New Haven, Conn.—*Composition for Cleaning and Silvering Metals*.—Patent dated March 13, 1860.—The claim explains the nature of this invention.

Claim.—The compound of "silver soap," herein described, consisting of an alkaline solution of silver, soap, carbonate of lime, and alcohol, in about the proportions stated, and for the purposes of cleaning and plating metals, as set forth.

No. 27,426.—ADOLPH BROWN and FELIX BROWN, of New York, N. Y.—*Improvement in Steam Pumps*.—Patent dated March 13, 1860.—The claim and engraving explain the nature of this invention.

The inventors say: We claim, first, connecting together the steam and pump cylinders of steam pumping engines by means of frames or stretchers, which contain the bearings of the crank shaft, constructed and arranged as described, and for the purpose set forth.

Second. The hinged valves constructed as above described, when the same are arranged and used in combination with steam pumping engines, as set forth.

No. 27,427.—WALTER R. BUSH, of Albany, N. Y.—*Improvement in Wheel and Dress Guards for Carriages*.—Patent dated March 13, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim, first, the attachment to the door of a carriage of a sliding guard, substantially as set forth.

Second. The method of operating such guard by means of a pulley containing a helix spring to raise the guard and maintain it in place, the spring being relaxed by an attachment from the pulleys to the body of the carriage, or by such lever and spring arrangements as are a mechanical equivalent for the same, substantially as set forth in the above specification.

No. 27,428.—JOHN W. COCHRAN, of New York, N. Y.—*Improvement in Cartridge for Fire Arms*.—Patent dated March 13, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The employment within the cartridge of two distinct charges of powder, substantially as shown and described, so that one of said charges will explode and start the projectile before the other charge is ignited, all as specified.

No. 27,429.—J. W. CONWAY, of Franklin, Ia.—*Improvement in Cotton and Hay Presses*.—Patent dated March 13, 1860.—When the head B is drawn back and the box filled with material to be pressed, it does not require so much power to press as it does when the material is in a more compact form. The cords *a a* consequently lie around the large ends of the pulleys I I, when the head B begins to move and press the material; said head has also more motion at this time than any other, but, as the head presses the material in, the cords

pass around the small end of the pulleys, thus increasing the power and decreasing the motion of the head.

Claim.—The employment of the screw F, the toothed wheel H, the conical pulleys I I and J, and the cords *a a* and *c*, when the same are arranged together and used in connection with the moving press head B, substantially as and for the purpose set forth.

No. 27,430.—JOHN CHANTRELL, of Bristol, Conn.—*Improvement in Knitting Machines.*—Patent dated March 13, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, so applying a series of sinkers in a ribbed knitting machine that they work between the two series of needles simultaneously, substantially as described.

Second. The arrangement, in combination with a series of sliding sinkers, of a series of bearded needles *a a*, and a series of latch needles *i i*, arranged obliquely in opposite directions to a line perpendicular to the sliding movement of the sinkers, as illustrated in Fig. 1, and herein described.

Third. The series of plates *t t*, applied, substantially as described, relatively to the two series of needles, to support the last completed course of rib loops against the action of the rib needles in forming the new course.

No. 27,431.—ADDISON CROSBY, of Fredonia, N. Y.—*Improvement in Induction Valve Gear for Steam Engines.*—Patent dated May 13, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, combining the reciprocating rod G, with the stems or shafts *a a*¹, by means of dogs F F¹, attached to the said stems or shafts, and catch bars M M¹, or their equivalents, attached to the said rod, when the said catch bars or equivalents are so constructed and applied to the said rod, and so controlled as to liberate the dogs during the stroke of the engine by a positive movement away from the said dogs, and transverse to the movement of the reciprocating rod, substantially as described.

Second. Controlling the liberation of the catch bars M M¹, by means of blocks N N¹, or their equivalents, applied to slide on the reciprocating rod I, from which the valves derive their opening movement, substantially as set forth.

Third. Providing for the variation in the lead of the valves by so constructing the catch bars M M¹, attached to the reciprocating rod, as to be capable of being lengthened or shortened, as herein specified.

No. 27,432.—ADDISON CROSBY, of Fredonia, N. Y.—*Improvement in the Eduction Valve Gear of Steam Engines.*—Patent dated March 13, 1860.—This invention consists of a bar, or rod, deriving a regular reciprocating motion from the engine, with the stems of two oscillating eduction valves, or with two rock shafts suitably applied in connection with valves of any other description, by means of arms on the stems or shafts and slotted links attached to the rod to operate in combination with the said arms in such a manner, that the valves are made to open quickly at the commencement of the stroke of the engine, and to remain wide open during nearly the whole stroke, but to close so gradually as to prevent slamming when valves of such construction, as are liable to slam, are used.

Claim.—The combination of the reciprocating rod C, with the stems or shafts *b b*¹ of the valves by means of arms A A¹, and wrists *a a*¹ attached to the said stems or shafts, and slotted links J J¹ attached to the said rod, the whole arranged substantially as herein set forth.

No. 27,433.—WILBUR M. DAVIS, of Carmel, Me.—*Improvement in Shoe Tips.*—Patent dated March 13, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The construction of such a tip or cap of wire cloth or gauze, or other braided, woven, or netted fabric of wire, whether of copper, brass, or any other metal, and the application of the same to a boot or shoe, sewed, nailed, or pegged or cemented, whether turned or otherwise, for the purpose of protecting the leather or other material of the shoe or boot from injury by wear or ordinary blows.

No. 26,434.—GEORGE DRAPER, of Milford, Mass.—*Improvement in Machinery for Spinning.*—Patent dated March 13, 1860.—The claim and engravings explain the nature of this invention.

Claim.—In combination with the drawing mechanism of a spinning machine, a mechanism which, as the quantity of yarn wound on a bobbin or a spindle of such machine may increase, and the front set of drawing rollers may be moved with a uniform or given speed, shall so decrease the motion of one or more of the remaining sets of drawing rollers relatively to the motion such may have on being started, as to cause the yarn spun and wound around the bobbin to have a uniform size.

No. 27,435.—SPENCER B. DRIGGS, of New York, N. Y.—*Improvement in Pianofortes.*—Patent dated March 13, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the employment, in a pianoforte, of a bridge or bridges of a depth equal to or nearly equal to the whole depth between the strings and the bottom or back of the case, in combination with a single sound board which either constitutes the back of the case or is arranged in the extreme lower or rear part of the same, substantially as described.

Second. The employment, for the purpose of holding the strings at either or each of the bearings or points between which they severally vibrate, of a clamp G, constructed with two jaws, and applied substantially as herein described, so as to be made to bite and clamp the string or strings by the same screw which screws it to the block, plate, or bridge, as set forth.

No. 27,436.—B. WELLS DUNKLEE, of Boston, Mass.—*Improvement in Ranges*.—Patent dated March 13, 1860.—This improvement consists in constructing the lower part of the dividing plate E, in the form of an inverted V, as seen at *c*, the object of which is to conduct the heated volatile products in a close unbroken body upwards, and by making it impinge more closely against the bottom portion of the central side of the oven's surface, so as to add to the heating qualities thereof, fastened also to the bed plate E, so as to entirely prevent the coming together of the volatile products until after they have risen above the V check plate at the top of the dividing plate.

The inventor says: I *claim* the construction and application of the dividing plate E, in the form as above described, in relation to the inducting flues D D, the bed plate F, the check plates *a*, and with respect to the damper K, top check plates *h h*, and ovens *d d*, substantially as and for the purpose set forth.

I also claim the annular *e*, with its openings *m f*, constructed and applied with respect to the damper K, top check plates *h h*, ovens *d d*, and dividing check plates E and *a*, and in relation to two inducting flues D D, substantially and for the purpose above described.

No. 27,437.—JOHN FASIG, of Congress, Ohio.—*Improvement in Pruning Implements*.—Patent dated March 13, 1860.—This invention relates to the combination of the saw, hook, and knife, and uniting them in such a manner as to form an instrument for pruning trees.

Claim.—The combination of an angular cutting edge *b*¹, the double edged saw *a*² *c*, and hook *d*, when all these parts are combined in one instrument, substantially as described, and operating as set forth.

No. 27,438.—WILLIAM FERGUSON and DAVID FERGUSON, of New York, N. Y.—*Improvement in Blackwashing Moulds for Casting*.—Patent dated March 13, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Blackwashing retort, pipe, or other moulds, by means of the piston D, provided with the hollow rod E, and having felt cloth F or other material around its edges, and brush G combined, or by either the piston and felt cloth or brush separately or equivalent device supplied with the blackwash, and operating as before described.

No. 27,439.—LAWRENCE F. FRAZEE, of New Brunswick, N. J.—*Improvement in Ash Sifters*.—Patent dated March 13, 1860.—The sieve of this sifter is agitated by means of an undulating ring running around the same, and the case is so arranged that the stones and cinders can be separated from the good coal without emptying the sieve.

Claim.—Arranging in the box A a double bottom C, with an aperture I, substantially as and for the purpose specified.

No. 27,440.—DENNIS C. GATELY, of Newtown, Conn.—*Improvement in Elastic Belting*.—Patent dated March 13, 1860.—The claim explains the nature of this invention.

Claim.—The belt or band produced with a friction surface as smooth as it practically can be by grinding or polishing down the rough or unequal surface of the belt, substantially in the manner and for the purposes described.

No. 27,441.—T. J. GIFFORD, of Salem, Mass.—*Improvement in Securing Scaffolding Brackets to Buildings*.—Patent dated March 13, 1860.—This invention consists in constructing the bracket itself in a peculiar manner, and in the use of a screw having a collar and a square-eyed head, which screw is driven into the building at suitable places, and the bracket attached to the same by a wedge key bolt.

Claim.—The combination, with brackets A B C and the knee plate E E¹, of the screw G *a f* and key J, all arranged in the manner and for the purposes set forth.

No. 27,442.—RICHARD GILL and GEORGE W. GRIER, of Altoona, Pa.—*Improvement in Furnaces of Steam Boilers*.—Patent dated March 13, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A deflector composed of two walls B² B³, which inclose an air passage C between them, and when the wall B² is furnished with openings, and the wall B³ is tight, and both

projecting forward over the fire, and when constructed, arranged and operating substantially as described and for the purpose set forth.

No. 27,443.—JACKSON GORHAM, of Bairdstown, Ga.—*Improvement in Organ Pipes*.—The object of this invention is to increase the quantity and quality of sound in organ pipes.

Claim.—Constructing organ pipes with two musical throats and mouths, both communicating with the foot *d*, for the purposes and substantially as set forth.

No. 27,444.—HENRY H. GRAHAM, of Patterson, N. J.—*Improvement in Connections for the Ends of Railroad Rails*.—Patent dated March 13, 1860.—This invention consists of a tapering bar combined with a clamp that is driven thereon at a joint between the bars, and acts to bind the rails, bar, and clamp together in such a firm manner, that the ends of the rail cannot separate.

Claim.—The tapering connecting bar provided with the lugs *l l* entering holes in the rails, in combination with the clamp *e*, driven on said wedge substantially as specified.

No. 27,445.—JOHN GUYER, of Westport, Conn.—*Improvement in Cultivators*.—Patent dated March 13, 1860.—The object of this cultivator is to weed between the growing crops. When the wheels are propelled by means of the handle *D*, the pressure exerted on the handle forces the wheels down on the ground at the same time the hoes are depressed, so that they work to the proper depth in the ground.

Claim.—The arrangement of the hoes *A*, springs *F*, guides *K*, handle *D*, axle *B*, and tubes *J*, as and for the purposes shown and described.

No. 27,446.—JASON W. HARDIE, of New York, N. Y.—*Improved Churn*.—Patent dated March 13, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the hollow revolving cylinder containing hot water, or its equivalent, with a fixed surface fitting against its periphery, and adjustable to different degrees of closeness thereto, whereby not only are the cream globules effectually crushed, but the requisite degree of temperature is imparted to the cream only momentarily while passing beneath the cylinder, and is again dissipated mostly by the falling of the cream into the churn body below, substantially as specified.

No. 27,447.—LEVY HEYWOOD, of Gardner, Me.—*Improved Chain for Timber Bending Machines*.—Patent dated March 13, 1860.—This invention consists in so forming the links of the chain that they shall confine the stick upon two or even three sides.

Claim.—The chain herein described, operating as set forth.

No. 27,448.—W. W. HORTON, of Schuyler's Lake, N. Y., assignor to himself and LUCIUS O. VEBBER, of the same place.—*Improvement in Water Wheels*.—Patent dated March 13, 1860.—This invention consists in a novel formation or design of the bucket of a direct action centre-vent water wheel.

Claim.—The specific construction of the bucket hereinbefore described, embodying a straight line in combination with an involute of a circle, the straight line and involute being relatively arranged to each other and the face of the wheel, as set forth.

No. 27,449.—H. M. HUTCHINSON, of Baltimore, Md.—*Improved Furnace for Railroad Cars*.—Patent dated March 13, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The hot-air chamber *A*, combustion chamber *C*, and feeder *F*, arranged as described, in relation to one another and to the car, and so that the cold air received by the combustion chamber may be drawn from the interior of the car.

No. 27,450.—EDWARD JULIER, of Beverly, Ohio.—*Improvement in Cultivators*.—Patent dated March 13, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the slotted, adjustable, laterally connected compound beam and stock *g g 2 h* and *L L M*, Figs 1, 3, 4, when combined with the solid wrought metal compound mould and share *d e n o s*, Fig. 5, and when said combination is so arranged as that the heel or butt end of one cutting edge overcuts the point or toe of the advance share, admitting also of being adjustable more or less forward or backward relative to each other, substantially as set forth and described.

No. 27,451.—JOHN P. KENNEDY, of Trenton, N. J.—*Improvement in Clay Gas Retorts*.—Patent dated March 13, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The securing of the mouth-piece to an earthen retort by means of an iron yoke or

band firmly clasping the neck of the earthen retort behind the collar, and having bolts on the outside of the retort passing to the flanch or mouth-piece—thus securing the earthen collar between the mouth-piece and the yoke or band; the whole being substantially as described.

No. 27,452.—LUCIUS J. KNOWLES, of Warren, Mass.—*Improved Safety Feed Apparatus for Steam Boilers*.—Patent dated March 13, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the balls E and F, placed outside and communicating with the boiler at different levels beneath the water line, and so arranged as to operate successively, the one to regulate the pump, and the other to operate the whistle, as set forth.

No. 27,453.—DAVID KNOX and THOMAS DITCHBURN, of Lynn, Mass.—*Improvement in Sole Cutting Machines*.—Patent dated March 13, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim*, first, giving a reciprocating or vibrating motion to the head D by means of the slot g and pin 9, substantially as set forth, and for the objects specified.

Second. The use of an eccentric bush in the eye of the connecting rods, substantially as described, for the purpose of raising or lowering the knives.

Third. Giving a lateral motion to the back gauge by the use of a swivel T, or in any equivalent manner, as described, so that both knives may be made to cut the same sized sole.

Fourth. The use of the double crank for actuating the connecting rods E F, in combination with the movable head D, substantially as and for the objects specified.

No. 27,454.—REINHOLD LANDSTROM, of Boston, Mass.—*Improvement in Coffee Roasters*.—Patent dated March 13, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* constructing the lining of a coffee roaster of staves or pieces and heads of soapstone, and a metallic frame, applied together, substantially as described.

And I also claim the mode of making each bar or stave provided with steam escape holes, viz: with a channelled or grooved external surface, so as to form with the outer case of the roaster a steam passage open at the ends of the stave, and to be so covered at the outer case that the coffee may be protected from the smoke and gases of the furnace, as specified.

No. 27,455.—GEORGE W. LANE, of Boston, Mass.—*Improved Method of Testing Hollow Spheres for Water Gauges and other Purposes*.—Patent dated March 13, 1860.—The inventor says: In carrying out my invention I employ a strong cylindrical or other properly shaped air tight vessel A, made of a material capable of withstanding a very high degree of pressure, viz: several hundred pounds per square inch; the stronger the vessel the better. The upper end of the vessel should have an opening a and a closing cover b, or a man hole plate so applied as to enable the hollow floats to be tested to be introduced into the vessel A, or to be removed therefrom after having been tested.

Claim.—The described mode of testing hollow floats, to be used in steam boilers or other vessels in which great heat and pressure, or either, may be employed.

No. 27,456.—JOHN T. LOFT, of Brooklyn, N. Y.—*Improved Machine for Covering the Springs of Skeleton Skirts*.—Patent dated March 13, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, covering wires or springs for hoop skirts by passing the same, in connection with strips or covers of suitable fabric having a suitable glue, cement, or adhesive substance applied to them through folders P, and between drawing and pressure rollers L M, arranged to operate substantially as and for the purpose set forth.

Second. The use of cutters a and disks or guides b f, placed respectively on the shafts F G K, in connection with the roller B, on which the fabric is wound, the glue or cement reservoir H, and the rollers I J, all being arranged substantially as and for the purpose specified.

Third. In connection with the glue or cement reservoir H and rollers I J, the reservoir C, and roller D, arranged relatively with each other, and the disks or guides f, on the shaft K, to operate as and for the purpose specified.

Fourth. The combination of the drawing and pressure rollers L M, folders P, roller N, glue or cement reservoir C H, with their rollers D I J, the roller B, cutters a, and guides b f, arranged for joint operation as and for the purpose specified.

No. 27,457.—FRANCIS C. LOWTHROP, of Trenton, N. J.—*Improvement in Plates for Securing Chords, Braces, &c., of Truss Bridges*.—Patent dated March 13, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of plate A, with open slots adapted to receive, and arranged in respect to, the enlarged ends of the chord rods G and G¹, and also arranged to receive the verticals and diagonals of a truss, frame, or other bridge, substantially as and for the purpose set forth.

No. 27,458.—EDWARD MATTOCKS, of Lyndon, Vt.—*Improvement in Shutter Operators*.—Patent dated March 13, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the devices set forth for controlling the movements of a window blind, whereby it may be unlatched, opened or closed and relatched, as circumstances may require, such devices being the rectangular tube C, the spring catch bar D, and the cord *f*, the same being arranged and made to operate together, substantially in manner as set forth.

No. 27,459.—THOMAS H. MCCRAY, of Moscow, Tenn.—*Improvement in Cotton Presses*.—Patent dated March 13, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the arrangement of the toggle arms E E E E, so as to connect all the four bale boxes, as described, in combination therewith, whereby the same action of the power applied will both effect the pressing in one pair of bale boxes and bring back the other pair of bale boxes ready for pressing again, substantially as specified.

I also claim the employment of movable bale boxes, in combination of stationary bed blocks, substantially in the manner and for the purposes specified.

No. 27,460.—S. T. McDUGAL, of New York, N. Y.—*Improvement in the Manufacture of Gas*.—Patent dated March 13, 1860.—This invention consists in the combination, for the purpose of making gas for illuminating and other purposes, by converting the vapor of hydrocarbons into permanent gases, of an air blast and vaporizing chamber, a retort and furnace and a purifying vessel and gasometer constructed and operated together.

Claim.—The combination of an air blast, a vaporizing chamber, a retort and furnace, a purifying vessel, and a gasometer, arranged and constructed substantially as described.

No. 27,461.—THOMAS E. MCNEILL, of Philadelphia, Pa.—*Improved Hot Air Register*.—Patent dated March 13, 1860.—This invention consists in combining a net work, or its equivalent, of fibrous, or other material capable of absorbing moisture, and a reservoir for water with a hot air register, so that the hot air from the register may pass in contact with the fibrous material and take up the water which it has received from the reservoir; also in a device for obstructing the passage of the water from the reservoir to the net work when the veins of the register are closed.

The inventor says: I *claim*, first, combining a net work, or its equivalent, of fibrous or other material capable of absorbing moisture, and a water reservoir with a hot air register, substantially in the manner and for the purpose set forth.

Second. I claim the plate I, with its projection *i*, when connected with the bar D, and arranged in respect to the partition *e*, as and for the purpose set forth.

No. 27,462.—WILLIAM MITCHELL, of New York, N. Y.—*Improvement in Apparatus for Revivifying Bone Black*.—Patent dated March 13, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, placing the cast metal plates I I on the fire arches J, arranged as shown, to wit: two being placed longitudinally in the chamber A, and the other transversely in a perforated partition, for the purpose of properly sustaining the plates I I, and at the same time permitting of a proper draught.

Second. The employment or use of two series or rows of chambers or tubes G H, placed at one or both sides of the fire chamber, when said chambers or tubes are placed in the position as shown, and the outermost rows made of smaller capacity than the innermost one, for the purpose specified.

Third. Having the chambers or tubes G H, made transversely, of egg form, (or of greater dimensions at one of their shorter curved sides than at the opposite ones,) and also made longitudinally and transversely of varying thickness, substantially as and for the purposes set forth.

Fourth. The arrangement of the flues J¹ K, in connection with the chambers or tubes G H, as and for the purpose described.

Fifth. The connecting of the coolers F, to the tube *d* of the chambers G H, by means of the ears or lugs *f* and hooks or pins *g*, as set forth.

Sixth. Forming the plates *k*, with fluted surfaces, so as to produce valleys or gutters *l*, and placing said plates in an inclined position on the top of the chamber L, for the purpose set forth.

Seventh. Connecting the chamber L, with the flues J¹ K, in the manner substantially as shown and described, so that the burning and drying processes may be performed simultaneously with one and the same source of heat.

No. 27,463.—GEORGE E. MILLS, of New York, N. Y.—*Improved Ore Washer*.—Patent dated March 13, 1860.—This invention consists in the construction and arrangements of the

channels in the bottom of which are countersunk slits or openings to discharge the water upon the revolving disk ; also the diverging rakes revolving in the opposite direction, and the flat or half round pipe to flow the ore from the disk and allow the hinged rakes to pass over freely, likewise the circular oblique riffles in the disk.

Claim.—The channels, the revolving rakes diverging from the centre, the oblique riffles in the disk, and the flattened or half round flow pipe, all in combination, as specified, and for the purposes set forth.

No. 27,464.—ANDREW J. MOSER, of New York, N. Y.—*Improved Book Ruler.*—Patent dated March 13, 1860.—This invention consists in curving the ends of a ruler in opposite directions and levelling the edges of the same in the usual manner, so that it may be used either side up as a book ruler.

Claim.—The book ruler, with curved ends, herein described and represented.

No. 27,465.—M. W. NALTON, of Utica, N. Y.—*Improved Measure Faucet.*—Patent dated March 13, 1860.—The claim and engravings explain the nature of this invention.

The inventor says : I *claim*, first, the employment or use of a plurality of hollow cylinders or vessels A B connected by tubes C provided with cocks, arranged substantially as shown and described, to admit of the alternate filling and discharging of the vessels, for the purpose described.

Second. The dividing of one or more of the hollow cylinders or vessels into compartments by means of the partitions provided with the valves *g h* and rod H, arranged as shown, to admit of the drawing off of the contents of one or more of the compartments, as occasion may require, in connection with the index I and graduated arc, all for the purpose and in the manner set forth.

No. 27,466.—JOHN NORTH, of Middletown, Conn.—*Improvement in Drop Letter Boxes.*—Patent dated March 13, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, applying to a drop letter box the inner lid, for the purpose of preventing the abstracting of letters from the aperture of the letter box, as described.

Second. I claim the inner lid, in combination with the outer lid, attached to a drop letter box, whereby the inside lid is closed on opening the outer lid, for the purpose as described.

No. 26,467.—GEORGE W. OSBORN, of Centreville, Mich.—*Improvement in Grain Cleaners.*—Patent dated March 13, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the trough *d*, the elevators D, the fan E, and the shoe, as constructed, the trough being placed at the bottom of the shoes, with one end passing into the elevator case, and having an independent longitudinal vibration, substantially as and for the purpose set forth.

No. 27,468.—B. E. ORTON, of Lyndon, Ill.—*Improvement in the Mode of Applying Horse Power to Mills.*—Patent dated March 13, 1860.—The object of this invention is to combine a horse power and grinding mill in such a way that a very compact mechanism will be obtained, and one that will admit of the mill being detached and other machinery connected, when required, so as to be driven by it.

Claim.—The combination of the toothed rim G, stationary pinions *d d*, adjustable pinions *b b*, mill D, and the bevel gearing I J, with shaft K, arranged substantially as and for the purpose set forth.

No. 27,469.—F. J. PALMER, of Knoxville, Tenn.—*Improvement in Car Seats.*—Patent dated March 13, 1860.—This improvement consists in combining spring clasps *f* with the shoulder plates B of the seat arms A, in such a manner that when the hinge straps C are resting upon the shoulders *g* of the shoulder plates B, the spring clasps *f* can be closed and locked over the hinge straps, until such time as the conductor may see cause to reverse the positions of the backs of the car seats; when the spring clasps are unlocked they will fly back to the position shown by the dotted lines in the engravings.

Claim.—Combining a self-locking clasping apparatus with either or both of the shoulder plates B of a car seat, substantially in the manner and for the purpose represented and described.

No. 27,470.—F. S. PEASE, of Buffalo, N. Y.—*Improvement in Hydro-Carbon Vapor Apparatus.*—Patent dated March 13, 1860.—The object of this invention is to facilitate the operation of impregnating inferior gas with the vapor of hydro-carbon liquids, such as naphtha, benzoles, ether, &c. The gas passes over a series of shallow pans filled with the liquid, and,

in order to cause the gas to absorb the vapor more readily, is compelled to pass through a series of stops, of wire gauze or perforated sheet metal.

Claim.—The combination of the box A, when provided with a supply pipe C at the top, and with pans B and plates *b*, as shown, with the condenser E, constructed as set forth, the whole operating in the manner and for the purpose represented and described.

No. 27,471.—JAMES PEATFIELD and SANFORD PEATFIELD, of Ipswich, Mass.—*Improvement in Elastic Belting.*—Patent dated March 13, 1860.—The claim explains the nature of this invention.

Claim.—As a new article of manufacture, India rubber belting made upon a knitted foundation, and having a slight degree of elasticity, as set forth.

No. 27,472.—JOHN PROTZ, of Easton, Pa.—*Improved Knife and Fork Cleaner.*—Patent dated March 13, 1860.—This invention is designed for ordinary family use, and to be operated by hand.

Claim.—The box A provided at one end with the pressure block *k*, attached to springs *b b* in connection with the leather B secured to the inner side of the lid A of the box, and connected at one end to a slide *d*, all being arranged to form an improved article of manufacture, for the purposes specified.

No. 27,473.—LEWIS L. REYNOLDS, of Manchester, N. H.—*Improved Window Screen.*—Patent dated March 13, 1860.—This invention consists in combining and arranging, with a window, the rods *c c*, in such a manner that they serve the purpose of holding a mosquito window screen in the window by the pressure of their ends against the sides of the window frame, and also allow the screen to be rolled up, to suit the varying heights to which the window is desired to be raised.

Claim.—The combination and arrangement of the frame A with the rods C C, the pins D, and springs E, substantially as and for the purpose set forth.

No. 27,474.—WILLIAM RIKER, of Newark, N. J.—*Improved Process of Embossing Designs on Metal for Jewelry.*—Patent dated March 13, 1860.—In the engravings is seen the die roll A in its frame, and adjusted over and above a smooth or plain roll B, which is fitted also in the frame and so arranged that both rolls may be operated in opposite directions by means of the handles F, the rolls being set together as firmly as required by means of the screws *c c*.

The inventor says: I *claim*, first, the use of the softer metal, as at K, Fig. 1, substantially in the manner and for the purposes described.

Second. I claim the use of the die roll A, Figs. 1 and 2, substantially in the manner and for the purposes set forth.

No. 27,475.—E. D. ROSENCRANTZ, of New York, N. Y.—*Improved Telegraph Wires.*—Patent dated March 13, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the employment of a compound wire for telegraphs, consisting of a silver centre and outside of copper, or other equivalent metals in which the centre is the best conductor, for the purposes set forth.

Second. I claim, in placing telegraph wires, the selection of the end leaving the draw plate, for the purposes substantially as set forth.

No. 27,476.—E. A. G. ROULSTONE, of Roxbury, Mass.—*Improvement in Trunks.*—Patent dated March 13, 1860.—This invention consists in making the body and ends of a trunk of corrugated metallic plates, so fastened together as to insure strong and water-tight joints.

Claim.—As a new article of manufacture, a trunk made of corrugated metallic plates, applied together substantially as set forth.

No. 27,477.—SILAS C. SCOFIELD, of Freeport, Ill.—*Improvement in Harrows.*—Patent dated March 13, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination, with the teeth of a rotary harrow, of a strip of metal running spirally from end to end of the harrow, and fixed at an intermediate point between the ends of the teeth and the harrow shaft, as set forth.

Second. I claim, in combination with the harrow frame and rotary harrows of the wheel G, hung in arms H H, which are jointed to the main frame, standards J J, and driver's seat K, when this seat is connected to the frame by the jointed braces L L, and furnished with a set screw *b* for raising the frame A A, in the manner set forth, at the same time allowing the frame to swing freely on the joint *a*, and adapt itself to the unevenness of the ground.

No. 27,478.—WILLIAM SELLERS, of Philadelphia, Pa.—*Improvement in Turning Lathes*.—Patent dated March 13, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, constructing lathe heads in the form of a hollow box, and revolving the spindles in journals which are connected together and surround the spindle throughout its length, substantially as described, and for the purposes specified, whether said journals are so arranged as to form a continuous bearing throughout the entire length of the spindle or not.

Second. I claim attaching the heads of a lathe to the bed in such a manner that a line drawn from the axis of a spindle perpendicular to the upper surface of said bed shall fall on or about the back edge of the bed, substantially as described and for the purpose specified.

Third. Constructing lathe beds with their upper surfaces horizontal, or substantially so, when this is combined with one other surface on the bed and corresponding surfaces on the heads, which surfaces being brought in contact shall insure the parallelism of the axis of the spindle, substantially as described.

Fourth. I claim the use of a plate bed having its upper surface divided longitudinally into two similar parts, each part having its edges bevelled so that the slide rest may be attached to either side, substantially as described and for the purpose specified.

Fifth. I claim the combination of the internal and external gearing on the same face plate, for the purpose of obtaining the required variation of speed and of stiffening the plate, substantially as described.

No. 27,479.—WILLIAM SHERBURNE, of Charlestown, Mass.—*Improvement in Scarf Pins*.—Patent dated March 13, 1860.—The object of this invention is to furnish a more secure fastening for the point of the pin after it has been passed through the shirt or other garment, and consists in moving up by means of a screw, a cap or cup over the point of the pin to hold it so that the pin cannot escape or be withdrawn until the cap is withdrawn by turning back the screw.

Claim.—Locking the pin *b* by turning the screw *d*, substantially in the manner set forth.

No. 27,480.—WILLIAM H. SHERWOOD, of Greenwich, Conn.—*Improved Composition for Artificial Stone*.—Patent dated March 13, 1860.—The ingredients composing this article are mixed in the following proportions: Alum, 2 ounces; soluble glass, 1 pint; solution of rosin, 4 ounces; water, 4 gallons. When these articles have been mixed, 3 gills of the mixture is added to one pound of Keen's cement.

Claim.—The within described composition of Keen's cement, alum, soluble glass, rosin, and water, mixed together in about the proportion stated, and for the purposes specified.

No. 27,481.—ROBERT A. SMITH, of New York, N. Y.—*Street Sweeping Machine*.—Patent dated March 13, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the arm or lever *B*, hung on and concentric with the main broom shaft *a*, moving as a radius therefrom; the lower part of said arm runs on the street by means of slides or rollers; the upper end *Y* is adjusted and secured as described.

I also claim the cup or concavity *J*, and inclined plane *I*, immediately under and adjusted to the circle described by broom *G*.

I also claim the inclined plane or spout *K* for conveying the dirt delivered by broom *G* into rows outside the cart wheel; this inclined plane can be supported at the highest end by hinges or springs, or by their equivalents, the lower end, by chains.

No. 27,482.—T. J. SOUTHARD, of Richmond, Me.—*Improved Hawse Pipe*.—Patent dated March 13, 1860.—This invention is an improvement in hawse pipes through which the cables pass when the ship is at anchor; these pipes are made of metal, and situated under the ship's head, and are employed to prevent the chains from rubbing or chafing the hull of the vessel. The claim and engravings will give an idea of the nature of the improvement.

Claim.—A hawse pipe extending into or through the side of the vessel, and provided on the outside end with a flanged head and cheeks containing a roller, substantially as described, for the purposes set forth.

No. 27,483.—MARCUS STEVENS, of Detroit, Mich.—*Improved Self-Adjusting Reclining Chair*.—Patent dated March 13, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement of the apron or front piece *C* hinged to the seat, in combination with the braces *b*, secured to the sides of the apron and hinged to the arms *D*, and pivoted to the stationary frame or body of the chair between the arms and the seat, substantially as shown and described.

Second. The detachable foot board, in combination with the hooks in the backs of the

front legs, and made reversible relatively to the front or apron piece of the chair for attachment thereto at pleasure in either of the two directions specified.

No. 27,484.—THOMAS THORP, of New York, N. Y.—*Cigar Heading Socket*.—Patent dated March 13, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the cigar heading socket made in one, two, or more parts, so constructed and arranged as to be attached to any cigar making machine, or in such a manner that the socket can operate to give a proper finish to various sizes of cigar heads, substantially as set forth.

I also claim, in connection therewith, the hinging of the parts A and E, at the point *a*, for the purpose set forth.

I also claim the said cigar heading socket with the opening *m*, made in the form and so as to operate as described, whether with or without the hinge *a*.

No. 27,485.—AUGUSTUS TUFTS, of Malden, Mass.—*Improvement in Lanterns*.—Patent dated March 13, 1860.—This improvement consists in constructing a lantern not only with a series of horizontal belts on the exterior of the glass cylinder, but also with a series of vertical refracting ribs on the interior of the lantern, whereby the lights are elongated and multiplied.

Claim.—In a lantern the combination of a series of horizontal refracting zones or belts formed on the exterior of the lantern, with a series of vertical ribs formed on the interior thereof, substantially as described, whereby the lights are both multiplied and elongated, as set forth.

No. 27,486.—ENOCH B. TURNER, of Providence, R. I.—*Improvement in Brakes for Railroad Cars*.—Patent dated March 13, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the simultaneous operation, by the momentum of the train, of the brakes upon the shoes on the wheels, in two or more railroad cars, through the action of the bar A connected with the shoes, in the manner substantially as described.

I also claim the stirrup D, and its combination with the cord described; one extending through the train, and the other connecting that cord with the stirrup, substantially as described for the purposes set forth.

No. 27,487.—DAVID UTLEY, 2d, and PELL TEEB, of Leicester, N. Y.—*Improvement in Straw Cutters*.—Patent dated March 13, 1860.—F is the frame of the machine, K the large knife working in guides *g* in front of the mouth of the machine attached at one end of the lever L, which is connected by a bolt with the lower part of the frame, this lever giving it a drawing stroke, and also assisting to raise it above the mouth for the fodder to be fed forward, the power being applied to the knife K by the pitman P from the crank shaft S.

Claim.—The arrangement of the knives K *K*¹, levers L *l*, pitmans P *p*, slotted guide G, crank shaft S, hopper H, concave bed *c*, and toothed roller R, as and for the purposes set forth.

No. 27,488.—JOHN WALCH, of New York, N. Y.—*Improvement in Stoves*.—Patent dated March 13, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The application and combination with a stove of an air chamber, constructed and arranged as described, said chamber rising directly from the lower part of the stove base until within a short distance of the top of the stove, and forming first the back part of the fire place or fire pot, and then a distinct division in the stove from one side to the other side of the stove, whereby the flame and gases are made to pass upon the front over the top and down in the rear of said chamber to the smoke pipe, in the manner and for the purpose substantially as specified.

No. 27,489.—A. F. WALDO, of Dryden, N. Y.—*Improvement in Grain Cleaners*.—Patent dated March 13, 1860.—The grain leaves the shoe G G of the hopper, and falls into the cup R, on the projection P. It passes along the bottom of the cup R and enters the spout S, when by the action of the blast and its gravity it is carried across the spout and strikes the opposite side, when being reflected it falls into the middle of the spout, and thence through the perpendicular portion of the spout into the grinding portion of the stone.

Claim.—The combination of the fan B, spouts O and S, valve V, and spring F, the cup R, slide K, and projection P, when constructed and arranged as specified, for the purpose of cleaning grain as the same is fed into the eye of the millstone.

No. 27,490.—WILLIAM WATSON, of Bishopville, S. C.—*Improvement in Ploughs*.—Patent dated March 13, 1860.—The plate E has an eye *e* on its upper end, into which a wedge *f*, pivotted on the standard B above the plate, is forced and serves to elevate the upper end of

the hook plate, and depress the lower end of the same, and thus cause the hook to take a firm hold upon the mould board D, and retain it in its place.

Claim.—The combination of the pivotted clamping hook plate E, fastening wedge *f*, standard B, and mould board D, substantially as and for the purposes set forth.

No. 27,491.—FRANCIS F. WELLS, of Texana, Texas.—*Improvement in Pessaries.*—Patent dated March 13, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, in the construction of pessaries, the particular manner of hinging the ring D to the tube A, and to the lever *c*, passing through said tube, so that the said ring may be readily turned on the tube and firmly held thereto when in its proper position for supporting the uterus, as substantially set forth and explained.

I also claim the particular manner of uniting the ring to the frame, viz: by means of the recesses in the ring and the swinging button S on the lever *b*, the whole being arranged and combined for the purpose of ready removal and replacement of the ring, for cleansing the instrument or changing the ring, substantially as represented.

No. 27,492.—WILLIAM ORTON WILLIAMS, of Washington, D. C.—*Improvement in Bridle Reins.*—Patent dated March 13, 1860.—This invention consists in crossing the bridle reins in such a manner that when the reins are held in one hand and moved to the right or left they may exert no counteracting influence on that side of the horse's mouth opposite to the direction in which you wish him to move.

Claim.—The combination of a ring, or its equivalent, with the crossed reins of a bridle, and this I claim whether combined with the martingale or not.

No. 27,493.—R. A. WILDER, of Cressona, Pa.—*Improvement in Railroad Switch Stands.*—Patent dated March 13, 1860.—The lock *i* is arranged in the body of the lever C; a shield F is then placed around it, so as not only entirely to secrete it but to form also a protected space for the bolt *e* to work in. The bolt *e* has a notch or recess 7 in it, into which the bolt 8 of the lock *i* shoots.

The inventor says: I *claim* the so arranging the lever *b*, that connects the bolt *e* with the main lever C, as that the operator, by one hand, may seize and operate both levers, substantially in the manner and for the purpose described.

I also claim, in combination with the lever C and the bolt *e* a locking mechanism and the shield F, for protecting the lock and bolt, substantially as described.

No. 27,494.—REUBEN WOOD, of Grand Ledge, Mich.—*Improvement in Jacks.*—Patent dated March 13, 1860.—The nature of this invention is explained by the claim and engravings.

Claim.—The combination of the pawls and ratchet bar with the disks D¹ D² D³, having annular inclined tracks E F, on their faces, between which rollers or balls may travel continuously in one direction, or alternately back and forth, in such a manner as to change the progressive speed at which the ratchet bar is worked by a different manipulation of the hand lever, substantially as and for the purposes specified.

No. 27,495.—HORACE WOODMAN, of Biddeford, Me.—*Improvement in Machines for Cleansing Machine Cards.*—Patent dated March 13, 1860.—The claim and engravings explain the nature of this invention.

The inventor says, I *claim*, first, raising, suspending, cleansing, and replacing the top flat cards by incline planes J, moved within the carding machine and between the arches and the end of the main cylinder, and the brush bar L, placed, secured to, and operated by and between these incline planes and over the card cylinder, essentially in the manner and for the purposes fully set forth.

Second. I claim the secondary incline planes M, so constructed and connected to the main incline planes J, as to elevate themselves by contact with top flat cards, and they in turn elevate the top flat cards when these incline planes M, pass from the feed roll towards the doffer, and they being depressed by contact with and also the top flat cards with them, in the return movement, and bring the card teeth of the cards and brush bar effectually together for cleansing the cards, essentially in the manner and for the purpose fully set forth.

Third. I claim imparting an intermittent motion to the brush bar L, by the combination and arrangement of the notched wheel D², pawl E, and cam G², in the manner set forth.

Fourth. I claim imparting to the incline planes J and M, a complete and then a partial movement to first cleanse all the top flat cards once, and then one or more the second time, and then back again to give an increased or double cleansing to the top flat cards most needing it, essentially in the manner and for the purposes fully set forth.

Fifth. I claim imparting first a complete and then a partial movement to the brush bar L, by means of the stud H², and arm I², combined with pawl E², cam or guide G², and wheel D², or any equivalent combination, essentially in the manner set forth.

Sixth. I claim so arranging and operating the brush bar L, in combination with comb T,

that the latter will cleanse the former at each cleansing it gives the top flat cards, essentially in the manner and for the purposes set forth.

No. 27,496.—A. J. WOODWORTH, of Henrico County, Va.—*Improvement in Soap*.—Patent dated March 13, 1860.—The inventor says: In making my washing soap I mix fifteen pounds of common washing soap, one gallon and a half of soft water and one half ounce of spirits of hartshorn, one half pound of sal-soda, one teaspoonful of spirits of wine, and two pounds of bleaching soap.

Claim.—As an article of manufacture, a compound soap, which has for one of its ingredients bleaching soap, and which is made substantially of the ingredients set forth in the proportions specified.

No. 27,497.—ABRAM GAAR, of Richmond, Ind., assignor to himself, JOHN M. GAAR, and WILLIAM G. SCOTT, of said Richmond.—*Improvement in Grain Cleaners*.—Patent dated March 13, 1860.—The nature of this invention is explained by the claim and engravings.

The inventor says: I *claim* separating the grain, chaff, and straw by providing the grain carrier as well as the straw carrier with separate boards E K, on which the grain is collected, and from which it is discharged separately to the fanning mill, substantially in the manner and for the purpose described.

I also claim arranging the upper line of the open straw carrier below and under the lower line of the cell carrier, when combined with a shaker F, and with the separating boards E g K, so as to produce a fall between the two carriers for the purpose of facilitating the separating of the grain from the straw, as described.

No. 27,498.—FRANCIS A. HOYT, of Boston, assignor to himself, GEORGE W. LANE, WILLIAM G. HOWE, and ALFRED W. ADAMS, of said Boston.—*Improved Magnetic Gauge for Steam Boilers*.—Patent dated March 13, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the arrangement of the lever arm box D, the indicator, steam column and case, and the float lever E, and float F, together and relatively to the boiler head, substantially as described.

I also claim the application of the fulcrum bearings to the lever arm box, and so as to be movable therewith and separate from the boiler head.

I also claim my improved arrangement of the magnet and its armature H, with reference to the interior or steam space of the boiler, the said arrangement consisting not only in placing the magnet in an indicating or other proper chamber, entirely insulated from or having no connection with the said steam space or the armature chamber, so that steam can pass therefrom into the magnet chamber, but in arranging the armature with respect to the magnet and applying the float to the armature, so as to operate it substantially in the manner as described.

I also claim combining a separate index pointer with the magnet so as to extend therefrom, as specified.

No. 27,499.—WILLIAM L. R. MATTASON, of Rochester, N. Y., assignor to himself and J. M. FRENCH & Co., of said Rochester.—*Improved Feathering Paddle Wheel*.—Patent dated March 13, 1860.—The wheel B turns freely on its axle, and is connected to the paddle wheel by cranks c c, which being of corresponding length with the distance between the centres of the two wheels, allow them to revolve together, the effect being to keep the cranks in the same direction constantly, viz: on a line with the two centres.

Claim.—The bearing resting arm or shoulder, substantially as and for the purpose of adjusting the centre of the eccentric wheel, as described.

No. 27,500.—ZURIEL SWOPE, of Lancaster, Pa., assignor to himself, H. D. MUSSLEMAN, and WILLIAM D. SPRECHER, of said Lancaster.—*Improvement in Lamps*.—Patent dated March 13, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Arranging the funnel E, and pipes F G and H, with such relation to the wick tube I, that heat may be taken from the flame and passed down into the lamp under the wick tube, so that the heated oil will rise towards the flame and around the wick, substantially as and for the purpose specified.

No. 27,501.—HALSEY D. WALCOTT, of Boston, Mass., assignor to MARTIN L. BRADFORD & Co., of said Boston.—*Improved Scissors and Nippers*.—Patent dated March 13, 1860.—The object of these is to supply the want of a convenient instrument for grasping the end of the thread to draw it through the eye of the needle, when in sewing machines it is in an inconvenient position to be taken hold of by the hand.

Claim.—As a new article of manufacture, a pair of scissors with the points of the blades formed into nippers, substantially as described.

No. 27,502.—Cancelled.

No. 27,503.—FRANKLIN W. WILLARD, of New York, N. Y., assignor to himself and E. G. ALLEN, of Boston, Mass.—*Improvement in Apparatus for Distilling*.—Patent dated March 13, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The method described of distilling and evaporating liquids, the same consisting in the employment of a revolving still, provided within its interior with a series of buckets, whereby while the still is maintained at a uniform temperature, the liquid which is to be acted upon is kept in motion, and portions of the same successively separated, taken up, and returned to the mass in thin films, substantially as specified and for the purposes set forth.

No. 27,504.—DANIEL H. WISWELL, of Buffalo, N. Y., assignor to CHARLES W. ADAMS, of Evans, N. Y., and DEBBY PINNER, of said Buffalo.—*Improved Churn*.—Patent dated March 13, 1860.—This invention consists in the application of the scoops or arms B, inserted in a shaft marked S, one at the base, the upper edge of which scoop leans backward ten degrees; the second, one third distant to the left, the upper edge of which leans backward five degrees; the third, one third distant from the second, and above the other at right angles. The placing of the scoops inclining at such different degrees is for the purpose of throwing the milk, or cream, against the ribs marked C, and upwards against the inner cover A.

Claim.—The inner cover marked A of the form described, the scoops or arms marked B, the sharp edge and slant of the upper part of ribs marked C, combined and arranged as specified, for the purposes set forth.

No. 27,505.—ALBERT H. WRIGHT, of Philadelphia, Pa., assignor to I. C. FULLER and B. I. WOODWARD, of said Philadelphia.—*Improved Elastic Chain or Surge Spring for Ships' Cables*.—Patent dated March 13, 1860.—This invention consists in the arrangement and combination of blocks or layers of elastic gum or India rubber with the links of a chain adapted for the purpose.

Claim.—The combined arrangement of the links A, elastic blocks B, and swivel bolts *e*, the same operating together in the manner and for the purpose specified.

No. 27,506.—S. F. VAN CHOATE, of Yreka, Cal.—*Improvement in Electric Telegraphing*.—Patent dated March 13, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the employment of a system of connections, substantially as described, connecting the main circuit of one line of electric telegraph and the local circuit of another line in such manner that, by opening the main circuit of one line, the current of its local circuit shall produce an interruption to the current of the main circuit of the other line by repulsive action, as specified.

I also claim the employment of a substantially similar system of connections, operating in a substantially similar manner, to render any electric circuit continuous or interrupted at pleasure by the closing and opening of another and entirely separate circuit.

No. 27,507.—STEPHEN M. ALLEN, of Niagara Falls, N. Y.—*Improvement in the Treatment of Fibrous Plants*.—Patent dated March 20, 1860.—This invention consists in subjecting the material acted upon to heated air, charged with water up to its point of saturation. The action of this saturated air softens and separates the elements that hold the fibres together, without destroying or injuring its natural structure, and opens the capillary tubes so that the albumen, resinous, and coloring matters can be readily reached and removed by water.

Claim.—The new mode of treating fibrous materials, such as flax, hemp, jute, manilla, grass, sugar cane, &c., the same consisting in subjecting them to the action of air charged or saturated with moisture or vapor, substantially as set forth.

No. 27,508.—JOHN ASHCROFT, of Lynn, Mass.—*Improvement in Low Water Safety Apparatus for Steam Boilers*.—Patent dated March 20, 1860.—This invention consists in the employment of a tube or pipe of fusible alloy, which is introduced into the length of and forms part of the pipe which is connected with the boiler, so that the water from the boiler may circulate over its interior surface and prevent the incrustation of the metal.

Claim.—A fusible tube D, or its equivalent, arranged in a pipe communicating with the boiler, as set forth, for the purpose described.

No. 27,509.—N. L. BABCOCK, of New Haven, Conn.—*Improvement in Breech Loading Fire Arms*.—Patent dated March 20, 1860.—This invention consists in the construction of the cock and its application with the pawl or dog for holding the barrel in close connection with the stock and breech, and in the ready manner of disengaging the same for loading.

Claim.—The combination and arrangement of the spring catch and hammer, whereby the detent E is securely held in place and forced home by the hammer C, when constructed substantially in the manner and for the purposes specified.

No. 27,510.—GEORGE BAILEY, of Buffalo, N. Y.—*Improved Machine for Printing Railroad Tickets*.—Patent dated March 20, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the printing of coupon tickets for railroads and other lines of travel, and numbering said tickets with their coupons in successive order or series, by one operation of the press, by means of an arrangement of a chase *e f* to hold the types for the ticket and its coupons and sets of numbering wheels corresponding to the ticket and coupons upon one press, operating so as to imprint the ticket upon a fillet of paper, properly fed along to receive said printing, as set forth.

I also claim the mechanism for feeding the paper under the types, in such manner as to perform likewise the operation of perforating or partially separating the coupons from each other and from the ticket, so as to be readily torn apart at the place of such perforations—consisting of two rollers or cylinders *W W*¹, one of which is plain, and the other armed with a series of rings *z*, having teeth upon them, which press upon or pass into the other or plain roller, so that the points of the rings will cut through or perforate the paper, and thus, by the act of perforation, secure the necessary grip to feed the paper, as described.

No. 27,511.—E. BALL and M. L. BALLARD, of Canton, Ohio, assignors to E. BALL, of said Canton.—*Improvement in Harvesters*.—Patent dated March 20, 1860.—The heel of the finger bar *C* is fastened in a recess in the shoe *B*. The heel of the cutter bar *f*, to which are fastened the cutters *F*, works in front of the projection or piece *j* of the shoe *B*, while the front of the cutter, which is fastened to the heel of the cutter bar, works under the lip *B*¹ of the shoe and the rear edge under the steel cap *A*.

Claim.—The combination and arrangement of an adjustable steel spring cap plate with the heel of the cutter bar and the shoe which supports the heel of the finger bar, substantially as described and shown in Figs. 1 and 2 of the drawings.

No. 27,512.—JAMES H. BANTA, of Piermont, N. Y.—*Improvement in Joint Chairs for Railroads*.—Patent dated March 20, 1860.—This invention consists of a moving block applied within the chair, combined with a longitudinal key passing through the chair and acting to press the block both against the side of the rail and down on the flange, whereby the ends are firmly and durably connected to each other.

Claim.—The block *c*, formed with the projection 4, taking beneath the key *d* and the flange 3, setting over the part 6 of the chain *b*, the whole constructed and acting substantially as set forth.

No. 27,513.—A. C. BARSTOW, of Providence, R. I.—*Improvement in Cooking Stoves*.—Patent dated March 20, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The double plate *d d e e* extending from the bottom to the top plate and throughout the width of the stove, forming a partition chamber *f f* so arranged as to separate the fire chamber from the flues, when said plate or chamber is provided at the top, or thereabouts, with apertures or openings *g* respectively, for the admission to and evacuation from said chamber of external air, whereby a continuous and rapid circulation of fresh air is necessarily created and maintained through and by the heat of the chamber, for the purposes herein specified, in combination with the flue passages near the top and at either end of said partition chamber, by which three or more boiler apertures can be used on the front of a stove and over a comparatively small fire, and the heat be applied equally to each, and by which also, when the heat has passed from the fire chamber, it is first applied to the ends of the oven where it is most needed.

No. 27,514.—E. BATES, JACOB WEIST, and MICHAEL WEIST, of York, Penn.—*Improvement in Shoemakers' Floats*.—Patent dated March 20, 1860.—This invention consists in a peculiar means employed for admitting of the self-adjustment of the float *E* and handle *B*, and, at the same time, holding the float sufficiently firm in any position relatively with the handle that may be required in using the tool.

Claim.—The combination of the curved dog *D* with the float or rasp *E*, springs *C C*, and rod *A*, when arranged and constructed as and for the purposes shown and described.

No. 27,515.—ROBERT BEANS, of Johnsville, Penn.—*Improvement in Guard Fingers for Harvesters*.—Patent dated March 20, 1860.—The wings *D* are so formed that when the fingers are arranged on the beam their ends shall come in contact, and thus serve as braces to cause all the fingers to render mutual support to each other.

Claim.—Forming the guard with curved wings *D*, extending on each side to serve as braces, and forming a crotch in their rear above the body or depressed portion of the finger, leaving a space between the rear of the wings and the front of the cutter bar and the open

spaces d^1 , on each side of the finger; the whole arranged to operate as described for the purpose set forth.

No. 27,516.—JOHN BOSTWICK, JR., and ABNER ALDEN, of Dedham, Mass.—*Improvement in Car Couplings*.—Patent dated March 20, 1860.—The India rubber cylinders or cushions C C^1 are received into corresponding recesses in the shell, and are sustained in their place by means of axis pins, and act as guides for directing the link D to its place in the operation of coupling the cars together. These cylinders rotate freely on their axes in the operation of pushing the link D between them.

Claim.—The combination of the rotating rubber cylinder C and C^1 , for directing and controlling link D , substantially as described.

No. 27,517.—A. J. BELL, of Greenupsburg, Ky.—*Improvement in the Arms of Carriage Axles*.—Patent dated March 20, 1860.—The nature of this invention is explained by the claim and engravings.

Claim.—In the construction of an ordinary compound truss axle A B C , making each of the arms thereof in two parts, a b , and with an oil space i , one of said parts being placed edgewise, vertically, and the other flatwise, horizontally, and both united together by a collar h and screw nut j , substantially as and for the purposes set forth.

No. 27,518.—WILLIAM H. BELL, of Washington, D. C.—*Improvement in Revolving Fire Arms*.—Patent dated March 20, 1860.—The main feature developed in this invention is adapting the stem on which the cylinder revolves to containing or supplying the wafer or other primer continuously to the cap nipples of revolving fire arms.

The inventor says: I *claim*, first, the use of a hollow axial stem D , furnished with a discharging device E , in combination with a revolving fire-arm, substantially as and for the purposes set forth.

Second. The employment of a spring device J^1 , in combination with a guide box K , for holding the primer securely in line with the nipples after it is elevated by the slide, and guarding it until the hammer explodes it, substantially as and for the purposes set forth.

Third. The combination of the barrel stop or dog h with the cock I , by means of a spring hook-shaped extension G of the primer lifting slide G , substantially as and for the purposes set forth.

Fourth. The combination of the sliding pin L with the series of primers and with the cock I , substantially as and for the purposes set forth.

Fifth. The combination of cam N with the sliding pin L , substantially as and for the purposes set forth.

No. 27,519.—DIXON BROWN, of Norfolk, Va.—*Improved Pin Fastening*.—Patent dated March 20, 1860.—This invention consists in attaching the pin directly to the plate, and having the pin coiled at its junction with the plate to form a spring, which will have a tendency to keep the point of the pin towards the plate, and using in connection with the pin thus coiled a claw or pointed prongs, which are attached to the plate.

Claim.—The pin B attached directly to the plate A , and coiled at its junction therewith, to form a spring a , in connection with the claw C , substantially as and for the purpose set forth.

No. 27,520.—J. D. BURDICK, of Newburn, N. C.—*Improvement in Operating the Slats of Window Blinds*.—Patent dated March 20, 1860.—This invention consists of a lever or pivotted handle, provided with a pressure spring, acting against a square or polygonal surface on the end of the lever, so that when the two parts are connected with the slat bar, the slats will be locked in their two extreme positions, and at any intermediate point at which they may be set they will remain in a fixed state.

Claim.—The lever D , constructed as described and represented, spring G and vibrating connecting rod F ; all arranged and combined, forming a new article of manufacture.

No. 27,521.—SARAH D. CARMAN, of Middletown, N. Y.—*Improved Reclining Chair*.—Patent dated March 20, 1860.—This invention consists in the manner of attaching the back to the seat, whereby the back is rendered susceptible of two different adjustments relatively to the seat, and the back rendered capable of being secured in a more or less inclined position, and also further forward or backward on the seat so as to increase or diminish the depth of the same.

Claim.—Attaching the back of a chair, sofa, or other seat, to its seat by means of a hinge or joint C , one or more, formed of two curved concentric bars a b , attached respectively to the seat and back, and with each other, substantially as and for the purpose set forth.

No. 27,522.—WILLIAM S. CARR, of New York, N. Y.—*Improvement in Valves for Water Closets*.—Patent dated March 20, 1860.—The nature of this invention is explained by the claim and engravings.

The inventor says: I *claim*, first, the independent cup leather valve i , controlled in its

motion by a cylinder having a water leakage, and closing against the end of a cylindrical passage between the supply and discharge pipe, substantially as set forth.

Second. I claim a slot x , in a cylinder containing a cup leather or plunger, for the purpose of allowing water to pass gradually from one side of said cup leather or plunger to the other to regulate the gradual closing of a valve in water closets as specified.

Third. I claim closing the water passage in the valve before opening the induction valve, so that there is no leakage or waste of water consequent upon the use of two valves acting successively in opposite directions, and neither of which may be upon their respective seats as set forth.

Fourth. I claim a cylindrical passage or waterway f , between the supply and discharge pipes combined with an elastic washer or plunger q that is forced into said waterway, and acts on the valve i substantially as specified.

No. 27,523.—VOSCO M. CHAFEE, of Xenia, Ohio.—*Improvement in Mowing and Reaping Machines*.—Patent dated March 20, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Arranging the platform on the frame in the manner I have described, and hanging it upon the centre or axle of the driving wheel J , and a corresponding centre m in the frame, by means of the arms T and m , and in making the arm T a part of the centre piece F , wherein one end of the shaft h has its journal, so that the arm T , the shaft h , and the platform H , shall all vibrate together about the same centre, and these I claim only when the whole is arranged substantially as described.

No. 27,524.—JAMES CLARK, of Baltimore, Md.—*Improvement in Sealing Lock for Railway Cars*.—Patent dated March 20, 1860.—This invention consists in providing the lock with a projecting stud c , perforated with a hole and a latch B , having an opening a that allows the stud to project through it, so that a sealing wire b may be passed through the perforation of the stud after the latch is in its place on the lock.

Claim.—As a new article of manufacture, the perforated stud c rising from the lock plate, as described, when employed with a swing latch and wire, for sealing the lock, the whole constructed as specified.

No. 27,525.—LUCIUS H. COLBY, of Groton, N. Y.—*Improvement in Wagon Jacks*.—Patent dated March 20, 1860.—The nature of this invention is explained by the claim and engravings.

The inventor says: I claim, first, the described hook H and slide G , for the purpose of holding the lever D in its place at any desirable position or altitude, when raising the wagon wheel off the ground.

Second. I claim so making the hook-shaped prawl that it shall clamp the rod by its leverage on the rod or slide and further its turning on the said rod, for the purpose of suiting the lever when in either series of holes in the plate, as described.

Third. I claim the combination as a whole, when composed of the standard, the plate C , with double series of holes, the lever, the slide or rod, the hooked prawl, clamping by its leverage at any point on the rod or slide by the action of the said lever, when the said combination is made and operated as described.

No. 27,526.—J. MASLIN COOPER, of Pittsburgh, Pa.—*Improvement in Revolving Fire Arms*.—Patent dated March 20, 1860.—This improvement is in the constructing and arranging of the parts of revolving fire arms so as to be adapted to fire either kind of ammunition (fixed or loose) by simply changing the revolving breech.

The inventor says: I claim, first, so constructing and arranging the lock and revolving cylinders c c^1 of revolving breech fire arms, substantially in the manner hereinbefore set forth, as that the same fire arm may be equally well used either with a cylinder open at both ends and carrying fixed ammunition charged at the rear, or with a cylinder constructed so as to load from the front and carry loose ammunition, or ordinary powder and ball.

Second. The mode hereinbefore described of rendering revolving breech fire arms susceptible of firing either fixed ammunition loaded from the rear or powder and ball charged into the front end of the breech, by the use with a single fire arm of two or more cylinders of different constructions to suit the different kinds of charge, so arranged in combination with the lock barrel of the fire arm as that either may be used at pleasure.

No. 27,527.—JOHN B. CORNELL, of New York, N. Y.—*Improvement in Safes*.—Patent dated March 20, 1860.—This invention consists in interposing between the inner and outer metallic walls of the safe a sheet or sheets of metallic plaster holding plates, which are swayed into alternating dove tail elevations and depressions, so that when the filling of any suitable anti-plogistic compound is put in, on both sides of this central wall, and allowed to set or dry, it will be attached firmly to the wall, and will not detach itself from it by shrinking or settling.

Claim.—Forming the interior fire proof wall of safes by interposing between the two layers of plaster the continuous metallic plate A, or any other suitable plate possessing the retaining shape, for the purposes and essentially as described.

No. 27,528.—JOHN B. CORNELL, of New York, N. Y.—*Improvement in Double Cylinder Fire Proof Columns.*—Patent dated March 20, 1860.—The nature of this invention is explained by the claim and engravings.

Claim.—Constructing an architectural column of two concentrically arranged cast iron tubes *a b* and an intermediate solid mass of fire proof composition, when the said parts are combined with each other in such a manner as to form but a single article of manufacture, which shall possess the characteristics set forth.

No. 27,529.—JOHN Q. COWELL, of Vernon, Ind.—*Improvement in Apparatus for Tanning.* Patent dated March 20, 1860.—This invention consists in such an arrangement of the several vats A B C as that the fluids contained in any vat may be transferred to any other vat in the tannery, by means of a system of troughs D, pipes A¹ B¹ F, and syphons.

Claim.—The arrangement of the vats and troughs to each other, as set forth, when said vats are provided with an angular space, separated from the basin of said vats by partitions, as set forth.

No. 27,530.—RICHARD T. CRANE, of Chicago, Ill.—*Improvement in Air Heating Furnaces.* Patent dated March 20, 1860.—The operation is as follows: the boiler C is supplied with a requisite quantity of water, and a fire is kindled in the fire chamber B. Steam will soon be generated in the boiler C, in consequence of a great heating surface being presented to the fire chamber. The steam fills the tubes F and chamber G, and a large radiating surface is thereby obtained in the chamber A, the air in passing up through said chamber A being quickly heated to the temperature of the tubes and chamber G.

The inventor says: I *claim*, first, the combination with an air chamber A and fire chamber B of the boiler C, tubes F, and steam chamber G, substantially in the manner and for the purposes described.

Second. The combination, with the fire chamber B, steam boiler C, tubes F, and steam chamber G, of the draught regulating and fire extinguishing devices described, substantially as and for the purposes set forth.

No. 27,531.—S. DAGGETT, JR., of Charleston, S. C.—*Improvement in Car Couplings.*—Patent dated March 20, 1860.—This coupling is self-locking, as the action of the shackle causes the rolling weight to change its position from the rear to the front end of the chamber in which it is inclosed, and by the motion of the chamber the working pin is pushed up and made to pass through the shackle.

Claim.—The arrangement of the hinged hollow chamber D with the rolling weight F and buffer arm E, in combination with the pin B and shell A, constructed and operating substantially as and for the purpose specified.

No. 27,532.—FLORIMOND DATICHY, of Paris, France.—*Improved Apparatus for Reworking the Waste Steam of Steam Engines.*—Patent dated March 20, 1860.—The nature of this invention is explained by the claim and engravings.

The inventor says: I *claim*, first, the method herein described of utilizing or reworking the exhaust steam or other escaping gas or vapor of an engine, by subjecting it, first, to a partial condensation and afterwards applying heat to evaporate its liquified products, and then injecting it, after its temperature and elasticity have been increased, in the form of steam or vapor, into the boiler for use over again, as specified.

Second. The employment of separate reservoirs, maintained at different temperatures, to receive successively the exhaust steam, gas, or vapor of the engine, and operating, first, to partially condense the steam, and afterwards to evaporate its liquified products and to increase its temperature and elasticity prior to its return to the boiler, there to be reworked, essentially as set forth.

Third. The employment, in combination with the exhaust steam receiving reservoir or reservoirs above named, of a worm or coil of pipes or other suitable heater, arranged in close proximity to the boiler furnace, for increasing the tension of the exhaust steam prior to its return in a vaporous form to the boiler, substantially as specified.

Fourth. Passing the exhaust steam in a vaporous form from its receiving chamber or reservoir to the worm or heater, by means of pumps or their equivalents, essentially as described.

Fifth. Causing a jet of steam from the boiler, or of working pressure, to be injected into the worm or heater, to raise the tension of the exhaust steam and to drive it into the boiler and control the suction of the pumps employed in supplying the heater and with exhaust steam, as set forth.

No. 27,533.—ALEXANDER DEAN, of Richmond, Ind.—*Improved Washing Machine*.—Patent dated March 20, 1860.—This invention consists in the use of two circular brushes C D, in combination with a tub B, the brush D being secured to the bottom of the tub, and the brush C forming the rubbing disk or follower; also, in the arrangement of levers E H and links F G with the tub and follower, for the purpose of vibrating the tub and follower in opposite directions simultaneously.

The inventor says: I *claim*, first, the combination of the vibrating disk or brush C with the vibrating tub B and brush D, or the equivalents to D, herein described, the whole being arranged in a manner substantially as described.

Second. The combination of the lever E and links F G with the brush C, tub B, and disk D, substantially as shown.

No. 27,534.—CALEB W. DYER and D. M. CUMMINGS, of Enfield, N. H.—*Improved Shingle Machine*.—Patent dated March 20, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim*, first, bringing one corner of a block of wood in contact with the teeth of a circular saw, and then imparting such a character of feeding movement to the said block as will enable the saw to cut its way through to the diagonal corner of the same, and in such a manner that the kerf lines on the main portion of one side of each shingle thus formed will be nearly parallel with the grain of the wood, all substantially as set forth.

Second. We also claim the combination of the carriage F¹ and the block holder F with each other and with the laterally movable plate G, the longitudinally movable plate O, the bearers N N¹, and the stop plates a a¹, substantially in the manner and for the purpose set forth.

Third. We also claim the undogging of the shingle block at the proper moment of time, and then dogging it again in a different position within the block holder, in the manner set forth.

Fourth. We also claim our improved method of imparting the forward and rearward movements to the carriage F, viz: by means of the cams j k on the face of the cam wheel U, which operate through the medium of the reciprocating sliding plate W¹, the vibrating lever W, and the auxiliary devices which are combined with the said parts, substantially in the manner set forth.

Fifth. We also claim the peculiar arrangement of the parts for transmitting different degrees of motion from the saw shaft I to the horizontal shaft S, viz: the broad bevel faced friction wheel I¹ on the saw shaft being secured thereto in such a manner that it is compelled to rotate therewith at the same time that it can be moved up and down the same, whilst the narrower bevel faced friction wheel S¹ is rigidly secured to the inner end of the shaft S, and the journals of said shaft are of such a length that it can be moved lengthwise to any desired extent by means of the hand lever K, or the equivalent thereof, substantially in the manner set forth.

No. 27,535.—JOHN EBNER, of Lancaster, Pa.—*Improvement in Shutter Operators*.—Patent dated March 20, 1860.—When the shutters are closed the headed bolt K drops into its catch L, and a touch on the tilter H inside will also bolt the shutter beneath the catch Q. They are opened by touching the other side of the tilter H; the beak G is withdrawn from its catch Q; and the other end comes in contact with the hook M on the rod I, and unlocks K.

Claim.—The push and pull bolt, with its joints A B C, and sliding box D, pivot Y on the plate Z, attached to the shutter; the weighted bolt K, operated on a pivot by a rod, with its hook M, and the double beaked tilter G and H, on the rod P, the stay plates F, when combined substantially as set forth for the purpose specified.

No. 27,536.—PEARSON EMBREE, of West Chester, Pa.—*Improved Churn*.—Patent dated March 20, 1860.—The nature of this invention is explained by the claim and engravings.

Claim.—The employment in a churn of a series of slats A A¹ A² A³, or projections B B, attached to the inner surface, and so arranged that each row shall point obliquely in the line of motion of the churn, and the slats in each successive row point in opposite directions, substantially as described.

No. 27,537.—JAMES E. EMERSON, of San Francisco, Cal.—*Improvement in Saws*.—Patent dated March 20, 1860.—This invention consists in having the saw provided with adjustable teeth, and portions of the under sides of the same and edge of the saw provided with a flanch of a width nearly equal to the cutting edges of the teeth, whereby the sawdust is discharged from the kerf, and the choking of the saw is avoided.

Claim.—The adjustable teeth B, in combination with the flanches C, formed on the inner sides of the teeth, and on the edge of the saw plate, substantially as and for the purpose set forth.

No. 27,538.—WILLIAM EMMETT, of Galveston, Texas.—*Improvement in Machines for Polishing Marble*.—Patent dated March 20, 1860.—A perforated or slatted rubbing or polishing surface to correspond to the surface to be polished is connected with a shifting box, and with a water reservoir in such a manner that a continuous supply of sand and water, in the required quantities, to the surface to be rubbed or polished is effected.

The inventor says: I *claim*, first, the arrangement of the rubbing surface F K or L, in combination with the sand box E, water box C, and shifting box A, or their equivalents, substantially as and for the purpose described.

Second. The employment of the rollers F F¹, or their equivalents, arranged for operation substantially as described, for the purpose of rubbing fluted columns.

No. 27,539.—JAMES HENRY BURTON, of Jefferson County, Va.—*Improvement in the Manufacture of Gun Barrels*.—Patent dated March 20, 1860; patented in England September 29, 1859.—This invention consists in the process of constructing a barrel of steel or iron of a uniform bore and exterior taper without welding.

Claim.—The making of gun barrels by drawing them down from a cylinder between grooved rolls C C, and over graduated mandres 1 2 3, so that they shall not only be reduced in diameter and in the size of the bore at each successive pass, but also tapered externally, substantially as set forth.

No. 27,540.—GEORGE A. ENGELHARD, of New York, N. Y.—*Improvement in Varnishes*.—Patent dated March 20, 1860.—The inventor says: I dissolve caoutchouc, gutta percha, and kindred vegetable substances, in one of their well known solvents, such as chloroform, benzole, chloride of carbon, &c. This solution is brought in contact with chlorine by passing a stream of gaseous chlorine into the same, in order to bring said chlorine in immediate contact with the gum contained in the solution. The solution, which is of dark color when first made, turns brighter as the chlorine begins to take effect, and after a certain time it becomes yellow, when the combination of the caoutchouc, gutta percha, and kindred vegetable substances, with the chlorine is perfected. The solvent is now removed by treating the solution with alcohol, which combines with the solvent and causes the new product to precipitate. After removing the solvent the new product is well washed with alcohol, and then dried. This new product when perfectly dry is dissolved in chloroform, bisulphuret of carbon, chloride of carbon, benzole, the quantity of which solvent is to be taken proportionate to the desired thinness or thickness of the solution.

Claim.—The use and application of the solution in question as a varnish suitable for wood, plaster of Paris, paper, photographs, ambrotypes, and as a varnish upon new metallic substances.

No. 27,541.—BENJAMIN D. EVANS, of Mount Vernon, Ohio.—*Improvement in Furnaces*.—Patent dated March 20, 1860.—The object of this invention is to obtain a furnace that will be capable of being used as a boiler and evaporator in the manufacture of sugar and for other purposes.

The inventor says: I *claim*, first, the combination of the furnace A and its attachment D, provided with the cold air chambers *b g*, and arranged to operate as and for the purpose set forth.

Second. The combination of the register B, furnace A, attachment D, cold air chambers *b g*, flue E, dampers *j F*, and boiler B¹, when arranged as shown, so that the above-named parts may be used jointly, and also admit of the furnace A being readily detached and used separately.

No. 27,542.—H. P. GENGEMBRE, of Allegheny, Pa.—*Improvement in Apparatus for Distillation of Coal*.—Patent dated March 20, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, a cylindrical or polygonal retort F, having at the centre of both ends a hollow journal or tube *f*, and being susceptible of receiving a continual or occasional movement of rotation or oscillation around its own axis, for the purpose specified.

Second. The construction and arrangement of the pillow blocks or of the friction wheels, as described, when used for the purpose of causing the motion of the retort itself to make the substance under treatment travel from one end to the other of the retort, and said retort to charge and discharge itself automatically.

Third. The charging box, constructed and operated as described, in combination with the retort, and for the purpose specified.

Fourth. The discharging tube, when used in combination with the hollow journal of a movable retort, as described, for the purpose specified.

Fifth. The gas pump fan T, or exhauster, the pipe V, the tube H, and the pipe *f*, as described, when forming part of a close circuitous conduct for returning over and over the permanent gases in the retort, substantially as specified.

No. 27,543.—RICHARD C. HARRINGTON, of Newark, N. J.—*Improvement in Gas Retorts*.—Patent dated March 20, 1860.—The nature of this invention is explained by the claim and engravings.

Claim.—The employment of a screw R, fitted to the cylindrical retort, substantially as described, in combination with openings C D, provided at the top and bottom of the retort, near the same end thereof, as described, for the purpose of arranging or distributing the charge and withdrawing the residuum.

No. 27,544.—MARK HOWLAND, of Waterbury, Conn.—*Improvement in Adjustable Stops for Window Frames*.—Patent dated March 20, 1860.—In order to remove the stops from the casing the screws F are unscrewed from the nuts *d d*, and, in order to adjust the stops nearer to or further from the sash C, the screws F are loosened or slightly unscrewed and the stops shoved towards the lower sash, the oblong slots *b* of the plates *a* permitting such adjustment; the screws F are then screwed into their nuts, and the washers E made to bind firmly against the plates *a*.

Claim.—The nuts *d* fitted in the stiles *c* of the window casing, the screws F, the slotted plates *a* in the stops D, and the washers E, to form fastenings for securing stops to window casings, substantially as described.

No. 27,545.—JAMES INGRAM, of New York, N. Y.—*Improvement in Fitting Sinks*.—Patent dated March 20, 1860.—This invention consists in a wall plate *a* attached directly to the brick work or plastering by wall hooks, and to this plate the sink is attached. In this plate the pipes *b b* are cast for conveying the water to the faucets and air chambers *c c* to relieve the concussion, the water pipes themselves being connected to the thimbles 1 1, cast so as to project from the end of the wall plate.

The inventor says: I claim a plate *a* attached directly to the wall or other support, when the pipe or pipes, air vessel or air vessels, are cast in such plate, and the water pipes connected to the thimbles 1 1, or their equivalents, as specified, and for the purposes set forth.

I also claim the arrangement of the flanges 4 and 5, for sustaining the sink and shedding off any water that may splash upon the plate *a*, when such flanges are formed on the said plate, as specified.

No. 27,546.—ABRAM H. JONES, of Fallsington, Pa.—*Improvement in Sewing Machines*.—Patent dated March 20, 1860.—This invention consists in the arrangement of the shuttle driver K, whereby the shuttle may be released from, and replaced in, a position to be acted upon by the said driver.

Claim.—The reciprocating slide L, its permanent projection *n* and the movable bent arm *p*, in combination with, and arranged in respect to, the double-pointed shuttle, as and for the purpose set forth.

No. 27,547.—JOHN H. KAUFMAN, of Lisburn, Pa.—*Improvement in Railroad Cars*.—Patent dated March 20, 1860.—This invention consists in having the bodies of the cars fitted between ways or guides on the platforms of the trucks and having racks on the under surfaces of the bottom of the cars, the racks gearing into pinion attached to shafts on the platform of the trucks, rim shafts being connected to springs, or their equivalents.

Claim.—The combination, with the car body D and platforms A, of the racks F, pinions and shafts G H, and springs I, substantially as and for the purpose shown and described.

No. 27,548.—LEVI S. LAPHAM, of Providence, R. I.—*Improvement in Lubricators*.—Patent dated March 20, 1860.—The object of this invention is to combine an oil chamber and pump in such a manner that the same may be applied to a steam cylinder and oil injected into the cylinder, or into parts connected therewith, by the simple action of the plunger only.

Claim.—The combination, with the cylinder A, pump cylinder D, and piston F, of the annular oil passage *k* and annular valve *j*, perforated in the centre, as shown, so that when the piston is withdrawn, the valve *j* will rise and the oil will enter the cylinder D, and when the piston is pushed down the valve *j* will close the passage K, and the oil will pass through the centre of the valve *j* to the machine to be lubricated, all as set forth.

No. 27,549.—PHINEAS LEACH, of Lewiston, Me.—*Improvement in Weather Strips for Doors, &c.*—Patent dated March 20, 1860.—The flanges *b* serve to attach the strip to the edge and sides of the door, so that the semi-circular part *a* of the strip C projects beyond the edge of the door, and when the same is closed this part of the strip adapts itself to the frame and closes the crevices existing between the door and the frame.

Claim.—A door strip, made of rubber or other elastic material, having a semi-circular part *a* with a flange *b* upon either side, as shown and described.

No. 27,550.—WILLIAM T. LEACH, of East Wareham, Mass.—*Improved Forging Machine*.—Patent dated March 20, 1860.—This invention consists in the manner of applying the hammers, in combination with their rock shafts, for the purpose of preventing the breakage of the hammer arms or other connection of the rock shafts.

Claim.—The combination of the arm *d* of the hammer hub, the mortised stud *G*, and the mortised arm *I* of the hammer rock shaft, the whole applied and operating together substantially as set forth.

No. 27,551.—C. V. LITTLEPAGE, of Austin, Texas.—*Improvement in Millstone Dress*.—Patent dated March 20, 1860.—This invention consists in the employment or use of curved furrows laid out or draughted on the face of the stone in a peculiar way, whereby the grain will be cut or reduced to a pulverulent state by a cutting action.

Claim.—The millstone dress shown and described, when made and laid out in the manner set forth, for the purpose specified.

No. 27,552.—JOHN B. MARVIN, of New York, N. Y.—*Improved Portable Furnace*.—Patent dated March 20, 1860.—The opening *a* serves to attach the blaze pipe *D*, and the opening *b* admits the blast from the wind pipe *E*, the mouth of which is kept at a greater or smaller distance from the opening *b*, according to the lower or higher temperature required, and according to the force of the blast.

Claim.—The combination, with a furnace *A*, of a blaze pipe *D*, and a wind pipe *E*, constructed and operating substantially in the manner and for the purpose specified.

No. 27,553.—THOMAS J. MAYALL, of Roxbury, Mass.—*Improvement in Hose Tubing*.—Patent dated March 20, 1860.—This invention consists in first covering a thin woven tube *a a* with a sheet or coating of India rubber *b b*, and then turning the hose inside out; another woven tube *c d e*, a little larger than the first, is then slipped or drawn over this woven tube, so as to fit tightly.

Claim.—A hose or tubing formed of two or more concentric, woven, seamless tubes, composed of flax, cotton, or other fibrous materials, one over the other, the innermost one having a lining formed, either wholly or in part, of India rubber or gutta percha, as set forth.

No. 27,554.—EDWARD MAYNARD, of Brooklyn, N. Y.—*Improved Tassels for Window Curtains, &c.*—Patent dated March 20, 1860.—This invention consists in covering the mould with glue or cement, and then applying "flock" thereto.

Claim.—As a new article of manufacture, the tassel mould, covered in the manner specified.

No. 27,555.—GEORGE MCKOWN, of Altona, Ill.—*Improvement in Upsetting Tire*.—Patent dated March 20, 1860.—The object of this invention is to obtain a device for upsetting, contracting, and punching tires for wheels, so that the former may be readily made to fit and be secured to the latter without being cut and rewelded.

The inventor says: I claim the stationary plate *H*, provided with an eccentric toothed jaw *h* and a lip *f*, in connection with a movable or sliding plate *D*, provided with a cap plate *a* having an eccentric jaw *e* and lip *f*, and operated by the toggles *E E* and screw rod *F*, substantially as and for the purpose set forth.

I further claim, in connection with the stationary and the sliding plate, and operating mechanism above named, the punch *J* and bolster *K* applied to the plates, as and for the purpose set forth.

No. 27,556.—DAVID L. MILLER, of Madison, N. J.—*Improvement in Hay and Cotton Presses*.—Patent dated March 20, 1860.—This invention consists in combining, with an open head press, of a suitable size and strength to resist lateral pressure, two movable followers having a simultaneous movement to or from each other, which is to be imparted to them by an arrangement of ropes or chains which are wound up, in opposite directions on a shaft, operated by a worm screw and wheel and suitable cranks or levers connected therewith.

Claim.—The combination, with the press box *A*, of the two followers *E E*¹, with their stripping bars *G G*², rollers *b b*, and hooks *c c*, pulleys *d d* working loose on their shafts *L*, shaft *K*, and worm wheel and worm shaft *N P*, the latter being hung in a pivotted bracket and operated as set forth, when these several parts are all arranged as and for the purposes described and represented.

No. 27,557.—JOHN MILLER, of Saltpeter, Ohio.—*Improvement in Water Wheels*.—Patent dated March 20, 1860.—This invention consists in making the facing to water wheels, known as the overshot, pitch back breast or wheel, of one fourth the width of the diameter of the wheel, to prevent the water from entering the wheel, and providing it with valves at the place where each arm is connected with the facing.

Claim.—The pivotted valves B, in connection with the conductors E E, in the manner and for the purpose described.

No. 27,558.—GEORGE W. MORGAN, of Prattsburgh, N. Y.—*Improvement in Self-Acting Wagon Brakes.*—Patent dated March 20, 1860.—C is the clasp that holds the ends of the bent levers B, and is secured to the hind bolster. D is a triangular shaped block fitted to the inner angle of the hind braces; it is the same thickness as the braces G, so as to allow the bar A to rest upon the braces when secured to the coupling bar; and when thus made, the bar A and block D will keep the hind traces in position without a bolt in the upward end of the braces as in other wagons.

Claim.—The arrangement of the clasp C and brake bar A, substantially as described, for the purpose of operating the brake levers, as set forth.

No. 27,559.—WILLIAM MORGAN, of Middlebrook, Va.—*Improved Churn.*—Patent dated March 20, 1860.—The churn being filled the operator seizes the handles of the sliding frame D, and by alternately pulling and pushing, imparts a horizontal reciprocating motion to the frame which gives a rapid motion to the dasher shaft, causing it to revolve first in one direction and then in another. The combined action of the inclined perforated beaters and breakers is such as to cause a violent agitation and thorough division of the particles of milk.

Claim.—The combination of the inclined perforated dashers or beaters *b*, the removable perforated breakers *a*¹, with the sliding frame D, when arranged for joint operation as described, for the purpose set forth.

No. 27,560.—SOLOMON MOYER, of Shimersville, Pa.—*Improved Machine for Bending Felloes.* Patent dated March 20, 1860.—The stick of wood to be bent for a felloe is laid into the spring clamp 6, and the wedges 5 5 are driven up tight; whereon it is placed on the slide rest D, between the mould H and clamp O, which is drawn up tight by the thumb screw 2, the nuts 7 7 are clamped on to the revolving screw E by means of the lever V and cranks 1 1, when the rest D is drawn forward by the revolving screw to the desired distance; whereon the belt is shifted on the loose pulley, and the slide rest brought to a stand, and by turning the crank P the rollers J J press the spring clamp 6 and felloe *m* tight up to the mould H.

Claim.—The sliding mould rest D, when operated as described, in combination with the tightening clamp O, thumbscrew 2, and lever V, in connection with the cranks 1 1 for operating the half nuts 7 7, when constructed as and used for the purpose set forth.

No. 27,561.—JOHN S. NOLEN and CHARLES C. HINCHMAN, of Paulsboro', N. J.—*Improvement in Boot Crimping Machines.*—Patent dated March 20, 1860.—This invention consists in giving elasticity to the follower, which is interposed between two jaws for the purpose of facilitating the removal of the finished boot front, and so that it will adapt itself to the convex surface of the former, when said former is forcibly brought down upon it with the leather attached thereto.

Claim.—The follower G, springs J J, with adjustable jaws B D, and former H, when the same are arranged and combined essentially as and for the purpose set forth.

No. 27,562.—FRANCIS ODELL, of New York, N. Y.—*Improvement in Attaching Thills to Vehicles.*—Patent dated March 20, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The key D, or equivalent, in combination with the head C on the end of the thill iron, and jack F, having a socket formation on its outer end, as described, for the purpose of forming a coupling for attaching thills to axles, substantially as set forth.

No. 27,563.—CLARK D. PAGE, of Rochester, N. Y.—*Composition for Artificial Stone.*—Patent dated March 20, 1860.—The claim explains the nature of this invention.

Claim.—The manufacture of an artificial glauconitic building stone, in the above-stated manner, of glauconitic earth or loam, such as is found in the cretaceous and some other geological formations, with the admixture of either cement, or sulphate, or hydrate of lime, substantially as described.

No. 27,564.—J. B. PALSER and G. HOWLAND, of Fort Edward, N. Y.—*Improvement in the Preparation of Straw for Paper Pulp.*—Patent dated March 20, 1860.—Our "Staple Fibre" is made from common rye or wheat straw, or other stalks. In preparing it the straw, or other fibrous substance from which it is made, is first cut into short lengths through the agency of any suitable cutting mechanism, then winnowed to remove impurities, then crushed and abraded by being passed between iron rollers; after which it goes through a process of steaming, boiling, &c.

Claim.—As an improved article of manufacture, the staple fibre, substantially as set forth.

No. 27,565.—JOHN G. PERRY, of South Kingston, R. I.—*Improved Machine for Filling Sausages*.—Patent dated March 20, 1860.—In operating this machine, motion being given to the wheels, by means of the crank with one hand, the meat is fed into the hopper B with the other, and is gathered towards the middle of the hopper by the action of the wheels and carried in between them, being pressed by the wheel C into the vacancies between the teeth D, and as the teeth D enter those vacancies the meat is forced through the spaces at the bottom of the vacancies into the pipe G, one end of which being closed it is obliged to come out at the other through the tube O into the cases.

Claim.—The combination of the gear wheel or roller C, and the wheel D, with the pipe G, substantially as and for the purposes described.

No. 27,566.—REUBEN ROLPH, of Coventry, N. Y.—*Improvement in Trace Safety Bars for Vehicles*.—Patent dated March 20, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the construction and arrangement of the metallic plate and longitudinal rod across the thills, the upright posts and rollers, between which continuous or connected traces are hitched, so as to render, laterally, the arrangement of the lever and sliding bolt to hold the traces in position for draft, and admit of them being detached instantly, all in combination as specified, for the purposes set forth.

Second. I claim, as a modification of the above, the double connected vibrators for hitching traces to vehicles, as described, for the purposes set forth and specified.

No. 27,567.—WILLIAM RICHARDS, of Barcelona, Spain.—*Improvement in Wet Gas Meters*.—Patent dated March 20, 1860.—This improvement relates to the construction of the revolving cylinder, or series of measuring chambers of water gas meters, in order to reduce as much as possible the amount of variation in the quantity of gas measured by any variations between the maximum and minimum height of water, or other such fluid, in the meters.

Claim.—The adaptation and combination of means in water gas meters, whereby the more accurate admeasurement of gas may be obtained, substantially as explained.

No. 27,568.—ARTEMAS ROGERS, of Painesville, Ohio.—*Improved Machine for Bending Wood*.—Patent dated March 20, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The employment of a pair of vibrating segments to produce a single bend in a piece of timber, when so arranged and controlled as to commence simultaneously at both ends of the stick to bend it, and by the completion of the process, constitute the mould, having a continuous curvature.

No. 27,569.—FREDERICK M. RUSCHHAUPT, of New York, N. Y.—*Improvement in the Adaptation of Substances as Motive Powers*.—Patent dated March 20, 1860.—The object of this invention is to produce a liquid which forms a gas of great elastic force and is easily condensed, and does not act injuriously upon the vessel containing the same, or upon the engine in which it operates, but really becomes a lubricator to all the working parts with which it comes in contact.

Claim.—The application of vapor from the liquid set forth, as a motor or propelling agent in engines, as specified.

No. 27,570.—JAMES SANGSTER, of Buffalo, N. Y.—*Improved Churn*.—Patent dated March 20, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the paddles Z and C and G, with the partition E, when said partition is provided with openings H J I K, near its centre, and with openings L M N O, near its periphery, which are partially covered by caps, as seen, for the purpose of passing the cream around and around through the openings, from circumference to center, and *vice versa*, substantially as specified.

No. 27,571.—THOMAS SCHOFIELD, of Grass Valley, Cal.—*Improvement in Floating Bridges*.—Patent dated March 20, 1860.—The object of this invention is to support bridges, light houses, or other structures above water in places where the depth of the water does not allow of the application of pillars commonly used for supporting such structures, and consists in arranging a series of hollow globes or cylinders made of iron, or other suitable material several fathoms below the surface of the water, where they are retained by chains secured to anchors to hold the globes or cylinders steady.

Claim.—The arrangement of the cylinders A, or their equivalents, with arms C, steadying rods B, standards D, and valves e, substantially as and for the purpose specified.

No. 27,572.—G. H. SEALEY and JAMES LEE, of New York, N. Y.—*Improved Case for Exhibiting Stereoscopic Pictures*.—Patent dated March 20, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim*, first, the combination of the shaft D, roller F, and bands E, or their equivalents, substantially in the manner and for the purpose specified.

Second. Having the ends of the aprons, or of the bands which carry the picture holders, firmly secured to the rotary shaft D, or its equivalents, substantially as specified, so that the whole chain of pictures is subjected to a uniform and positive strain, in whatever direction the shaft is turned.

Third. The arrangement of the spring clasps *d*, in combination with the cross bars *c*, substantially as and for the purpose set forth.

Fourth. Arranging the picture holders G, with wooden cross bars *c*, substantially as described, so that the same allow of being attached to the bands or apron in a ready and cheap manner.

No. 27,573.—WILLIAM SEWELL, of New York, N. Y.—*Improvement in Surface Condensers for Steam Engines*.—Patent dated March 20, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination and use, in the manner shown and described, with the tubes and tube sheets, and follower or plate D, of a series of independent elastic rings, for the purpose set forth.

Second. The simultaneous compression of the whole or a portion of said series of elastic rings by means of a plate D, either whole or divided, substantially in the manner and for the purpose shown and described.

Third. The employment of the flanged tubes in combination with the plate D, and said rings, as and for the purpose shown and described.

No. 27,574.—A. SHERMAN, of Poughkeepsie, N. Y.—*Improvement in Attaching Thills to Vehicles*.—Patent dated March 20, 1860.—The object of this invention is to form a simple and efficient arrangement for coupling shafts or thills to the clips to make the attachment secure and to prevent a rapid wear of the parts, and to prevent noise occasioned by the wear and rattling of the thill irons in the clip.

Claim.—The slotted semi-cylindrical enlargement B, on the end of the thill irons, rubber packing E, pin J, jaws G, the clips with their slots and the pins *a*, projecting from the sides of the enlarged portions B, when the same are all combined and arranged in the manner and for the purposes set forth.

No. 27,575.—O. SHERWOOD, JR., of Independence, Iowa.—*Improvement in Railroad Gates*.—Patent dated March 20, 1860.—This invention relates to that class of gates which are made to open and close by the action of the approaching and departing train, so that the track is thrown open only to let the train pass. The action of the wheels of the train on two hinged additional rails cause the gate to rise, keeping the same up until the last pair of wheels of the last car in the train have passed off from said hinged rails, when the gate descends by its own gravity.

Claim.—The arrangement of the pulley D, pinion *d*, toothed sector *e*, and lever E, in combination with the hinged rails G, bar F, and gate A, constructed and operating as and for the purpose substantially as described.

No. 27,576.—WILLIAM N. SLAYSON, of South Reading, Mass.—*Improvement in Pumps*.—Patent dated March 20, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Connecting the rocker piston to the curved rim of its case, and so applying such rim to the remainder of the case as to enable both piston and rim to be moved together, or simultaneously, relatively to the said remainder of the case, as specified.

No. 27,577.—JOHN SMALLEY, of Bound Brook, N. J.—*Improvement in Sewing Machines*.—Patent dated March 20, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination of a hollow stationary "spool case" capable of containing different sized spools of cotton, with a rotating hook or looper, substantially as described, for the purpose set forth.

Second. I claim so arranging the spool case as that the needle shall always descend into the centre of the spool placed in it, as described.

Third. I claim the formation of the spool case S, in the manner specified, with a centralizing and steadying shaft S¹, substantially as set forth.

Fourth. Disclaiming the passing of the needle thread around an ordinary spool carrying the lower thread, when the said spool changes its position relatively to the other parts of the

machine, I claim passing the needle thread around an ordinary spool containing the lower thread, remains always in a fixed position, substantially in the manner described.

Fifth. I claim the rotary hook and vertically fixed spool in combination with a needle carrying its thread into the centre of the spool, substantially in the manner and for the purposes described.

No. 27,578.—WILLIAM E. STEIN, of New York, N. Y.—*Improved Dress Lifter*.—Patent dated March 20, 1860.—A is a waist band intended to fasten at the back by means of a hook and eye, or other fastening; *a a*, *b b*, are four flexible tubes attached to the front of said band and so held in place by means of a piece of cloth, or other fabric B, connecting them with each other and with the band so that when the band is on the waist and fastened behind, the two tubes *a a* will hang in front of the hips and the two longer ones *b b* will pass over and behind the hips.

Claim.—A dress lifter composed of a waist band A, fabric B, guide tubes *a b*, cord *c d*, tapes *g*, and weights *i*, arranged and constructed as set forth and described.

No. 27,579.—WILLIAM STEWART, of Philadelphia, Pa.—*Improvement in Grinding Mills*.—Patent dated March 20, 1860.—This invention consists in attaching the running grinder to its shaft in such a manner that it will have a certain degree of play and be self-adjusting, so as to conform to the position of the stationary grinder and at the same time be rendered capable of being adjusted to grind fine or coarse.

Claim.—The arrangement of the runner C, tubular shaft F, conical hub I, key J, slot *h*, spring K, absorbent *j*, and screw M, as and for the purpose shown and described.

No. 27,580.—D. B. TIFFANY, of Xenia, Ohio, and S. W. SOULE, of Milwaukee, Wis.—*Improved Machine for Printing Addresses on Newspapers, &c.*—Patent dated March 20, 1860.—This invention consists in the use of a pressure lever, travelling form, and peculiar means employed for operating the same.

The inventors say: We claim the combination of the pressure lever F and the chase B, containing the form; the chase being operated from the lever, as shown, or in any other equivalent way, and the pinion D¹ made to perform the double function specified, substantially as and for the purpose set forth.

Second. We claim raising or separating the particular line of type forming the address to be used from the remainder of the type in the chase, in the manner set forth, or an equivalent manner, for the purpose specified.

Third. We claim the sheet metal plate J, or its equivalent, for returning the type to their proper positions, substantially as specified.

Fourth. We also claim a traversing partitioned galley or chase, for holding and dividing the addresses, substantially as and for the purpose specified.

No. 27,581.—PHILIP UMHOLTZ, of Fremont, Pa.—*Improved Coal Breaker*.—Patent dated March 20, 1860.—This invention consists in constructing the teeth of coal breakers of two different sizes, and in arranging them in alternate rows parallel to the driving shafts and upon rollers of equal size, so that the large teeth of each roller shall be opposite to the small teeth of each other one; also in the arrangement for allowing the driving shaft to turn in the driving wheels so as to prevent breakage of machinery, when stone, &c. get in with the coal.

Claim.—The combination of the clutch I, as constructed, with the rollers B and B¹, constructed as set forth, operating as described and for the purposes set forth.

No. 27,582.—T. R. VAN GELDER, of Damascus, Pa.—*Improvement in Collecting Toll from Grist Mills*.—Patent dated March 20, 1860.—B is an inclined spout which is placed at one side of the wheel A, and has an open space in its side adjoining the wheel A. The shaft C of the wheel has its bearing *c*¹ in a frame D, the spout B being secured in said frame, and also a vertical spout E, which communicates with a garner containing the grists.

Claim.—The arrangement and combination of the toll spout B, vertical wheel A, open bucket *b*¹, and the spout E, as and for the purpose shown and described.

No. 27,583.—DAVID VAN KLEECK, of Cohocton, N. Y.—*Improvement in Harvesters*.—Patent dated March 20, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim the arrangement of the reversible draft bar L, connecting the tongue G, with the frame A, between the frames A D, in such a manner that it may be reversed without turning the machine, substantially as set forth.

I also claim the adjustable reel K, made to change from side to side by the cutter bar, without unbanding, by means of the shifting links O, and pulleys *g h*, substantially as described.

I also claim the reverse cutting or two edged sickle *f*, in combination with the centre guard plate *b*, and shifting apron *n*, substantially in the manner and for the purposes set forth.

No. 27,584.—GEORGE WALKER, of Springville, N. Y.—*Improved Washing Machine*.—Patent dated March 20, 1860.—The object of this invention is to subject the clothes to be washed to a squeezing as well as to a rubbing process. The rubber in this machine is arranged on an arm, or arms, connecting with a radius bar in such a manner that by imparting to the rubber a rolling motion, it assumes at the same time a longitudinal sliding motion over the clothes, subjecting them to the rubbing process, while the weight of the rubber with its attachments, regulated, if necessary, by a downward or upward pressure of the hand, is sufficient to exert the necessary pressure on the clothes.

Claim.—The combination of the radius bar *F*, with the tub *A*, rod *D*, lever *E*, and convex rubber *C*, as shown, so that said rubber will have a combined rotary and longitudinal motion, as and for the purpose shown and described.

No. 27,585.—SYLVENUS WALKER, of Boston, Mass.—*Improved Bedstead*.—Patent dated March 20, 1860.—This invention relates to an improvement in the manner of constructing, arranging, and connecting together the parts of a bedstead frame of light and cheap construction, which may be readily connected and disconnected.

Claim.—The end fastening *D*, as constructed and arranged, for the purposes set forth.

No. 27,586.—REUBEN WARREN, of Jefferson, Ohio.—*Improvement in Boot Crimping Machines*.—Patent dated March 20, 1860.—The inventor says: To use my machine I pass the leather under the "broke," draw up the corners, and take hold of them with the pincers *L*; the jaws being properly adjusted I gradually work the lever up and down, carrying the leather gradually into the jaws in the way of the wrinkles, at the same time I turn the crank *M*, thus raising the leather up against the "broke," this gradually brings the leather into form.

Claim.—The flexible jaw bolt and thumb screw, in combination with the "broke" pincers, and tongues, as stated, for the purpose of crimping leather only.

No. 27,587.—ALEXANDER T. WATSON, of Castleton, N. Y.—*Improvement in Railroad Car Springs*.—Patent dated March 20, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim, first, the manner of arranging and combining the two springs *B B*¹ in pairs of different lengths and curves, so that when pressure is applied, the one spring gives out its elastic force from compression, and the other, as soon as acted on by the first spring, yields an elastic force from tension; the two together affording an increasing strength and elastic power as the pressure increases.

Second. I claim the form of the frame or setting *A A*, by which the springs are held in position and made to act in the manner described.

No. 27,588.—GEORGE WESTINGHOUSE, of Schenectady, N. Y.—*Improvement in Crank Boxes*.—Patent dated March 20, 1860.—This invention consists in a novel way of securing the slide in the box, whereby the slide may be readily adjusted, and the box properly fitted to the crank wrist, and the crank at the same time firmly secured in position without the liability of being thrown out from the wrist during the rotation of the same.

Claim.—The slide *D*, fitted within the dovetail slot *C* of the body *A* of the box, in connection with the screw bolt *E* passing through the body *A*, and an oblong slot in the slide, substantially as and for the purpose set forth.

No. 27,589.—JOHN M. WHITNEY, of Bolton, Mass.—*Improved Odometer*.—Patent dated March 20, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim so constructing an odometer that the revolutions of the wheel of the vehicle are registered equally reliable, in whichever direction the said wheel may be rotated.

I also claim the combination of a series of ratchet wheels on one centre, with a series of operating slide bars driven by cams on the ratchet wheels, substantially as described, for the purpose set forth.

I also claim the employment of a rubber, or other equivalent cushion, in combination with the yielding castor holder *K*, as specified, for the purpose set forth.

No. 27,590.—BARNABAS WOOD, of Nashville, Tenn.—*Metallic Composition for Fusible Alloy, and other purposes*.—Patent dated March 20, 1860.—The claim explains the nature of this invention.

The inventor says: I claim the composition of matter or alloy, consisting of the following proportions of cadmium, lead, and tin, or any modification thereof, substantially as indicated, so as to produce a similar result in alloys, to wit: cadmium from one to two parts, lead two

parts, tin four parts, possessing the properties and advantages described, and that may be used as a metallic cement and for other purposes, and to which also mercury may be added, as set forth, to modify the result for particular cases.

I also claim as a further application of the same principle, embodied in the production of the aforesaid alloy, the composition of matter or alloy consisting of from one to two parts cadmium, two parts tin, four parts lead, and seven or eight parts bismuth, or any modification thereof, as specified and indicated, so as to produce an alloy, as described, useful as a cement and for other purposes, as set forth, and to which also mercury may be added, as stated.

What I claim as new, in either case, is the specified improvement in alloys produced by using cadmium in the ratio and manner described, in combination with the metals specified, in the proportions thereof, substantially as set forth.

No. 27,591.—THEODORE BURR, of Hastings, Mich., assignor to himself, J. B. LORDELL, and A. PELHAM, of said Hastings, and H. BURR, of Allen, N. Y.—*Improved Machine for Cutting Files*.—Patent dated March 20, 1860.—The inventor says: I construct a metallic bed piece or frame work A with ways for a slide, or table marked B having fasteners C by which the blank file is firmly secured to the table; and also with ways for a pedestal D upon which I adjust the hammer and chisel and cutters and the spring to bear upon the hammer, the pedestal being so constructed as to receive a set screw E attached to the bed, by which means the force of the hammer is varied so as to cut the required depth in the file, by changing it more or less, in mesh with the tappets on the cylinder F.

Claim.—The use of the cylinder F, constructed as described, in connection with spring hammers, cutters, and file blank carriers; the whole operating in the manner and for the purpose described.

No. 27,592.—GEORGE COOPER, of Hartford, Conn., assignor to ALBERT BURGESS, of Windsor Locks, Conn.—*Improved Breech Clamp*.—Patent dated March 20, 1860.—This invention consists in making additional improvements in the "hold fast," as commonly used by cabinet makers.

Claim.—The arranging together of the shank *b*, arms *e*, pad *f*, with a proper fastening device as a screw *i*, substantially in the manner and for the purpose described.

No. 27,593.—JOSEPH J. COUCH, of Brooklyn, N. Y., assignor to JOSIAH S. SWAN, of New York City.—*Improvement in Sewing Machines*.—Patent dated March 20, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, maintaining the needle thread of a sewing machine tight as the point of the needle penetrates the fabric, delivering out the necessary amount of thread for forming the loop and for the distension of the loop by the passage through it of the shuttle, maintaining the thread slack as the needle begins to rise, and finally drawing up the slack thread so as to complete the stitch by means of the lever G, or its equivalent, in combination with the washers and clamp, or other device for imparting the desired friction to the said lever; the latter being operated by the needle arm or other moving part of the machine, substantially as and for the purpose set forth.

Second. The stationary eye *k*, in combination with the lever G, or its equivalent, when the latter is arranged, applied, and operated substantially as set forth, and when the eye is made adjustable in respect to the lever, for the purpose specified.

Third. The combination of the lever G, applied and operated substantially as set forth, with the shuttle of the sewing machine, so that the said lever may yield slightly on the distension of the loop by the shuttle when more than the usual amount of thread is required for the stitch, as set forth and for the purpose specified.

No. 27,594.—L. W. LANGDON, of Northampton, Mass., assignor to himself, HIRAM WELLS and D. G. LITTLEFIELD, of said Northampton.—*Improvement in Sewing Machines*.—Patent dated March 20, 1860.—This invention consists in a peculiar revolving take up which is attached to the driving shaft, and operates independently of the needle bar, casts off the thread at the required moment to form the loop for the entrance of the shuttle, leaves the loop loose until the shuttle has passed through and then tightens up the stitch.

The inventor says: I *claim*, first, operating a four motion feed by means of a loose and a friction joint, substantially in the manner and for the purpose specified.

Second. I claim the revolving take up L, operating as set forth, for the purpose of governing the needle thread, as described.

Third. I claim the hook T, or other equivalent device, for the purpose of keeping the shuttle thread tight, as described, when used in combination with a needle driven by a crank, as set forth.

Fourth. And, in combination with a needle driven by a crank, I claim the rib *h*² in the shuttle race, with its notch or shoulder 3, for the purpose of preventing the loop from being carried forward by the shuttle, as set forth.

No. 27,595.—E. A. LELAND, of Jacksonville, Ill., assignor to himself and STEPHENSON & TOMPKINS, of said Jacksonville.—*Improvement in Gas Stoves*.—Patent dated March 20, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: The combination, with the base B and cylinder A, of the gas box *a b c*, and supply pipe E, as shown and described, so that the device may be used as a cooking or air-heating stove at pleasure, as set forth.

No. 27,596.—DANIEL MINTHORN, of Beverly, Mass., assignor to JOHN A. GREENE, of said Beverly.—*Improvement in Enema Syringes*.—Patent dated March 20, 1860.—This invention consists of a thin hollow piece of metal, formed by punching, bending, or otherwise, with its smaller end of hemispherical shape, and its sides or remaining portion extended therefrom in such a manner as to form a comparatively large open mouth, the said sides or larger portion of the valve having one or more apertures.

Claim.—The hollow valve, constructed with a hemispherical end and having apertures or throats formed in its sides for the fluid to pass through, substantially as set forth.

No. 27,597.—WILLIAM H. NOYES, of Gardiner, Me., assignor to GIDEON S. PALMER, of said Gardiner.—*Improved Machine for Reducing Wood Slivers*.—Patent dated March 20, 1860. This invention consists in the employment, in front of the cutter, of a series of splitting knives, so arranged with reference to each other as to secure the surface of the bolt longitudinally, without so compressing the fibre as to cause it to bind upon the said knives and obstruct their operation.

Claim.—The combination, in a sliding stock O, of the cutter B and splitter C, made up of a series of knives in rows, so arranged that the posterior rows shall score the spaces left by the foremost row, substantially in the manner and for the purpose specified.

No. 27,598.—ELIZABETH KEAGY, of Mineral Point, Va., administratrix of SAMUEL KEAGY, deceased, late of said Mineral Point.—*Improved Centring Chuck for Lathes*.—Patent dated March 20, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The sliding thimble or sleeve D fitted on the mandrel C, connected with a loaded lever E and provided with a flaring or funnel shaped outer end, concentric with the mandrel and its centre points *a*, to form a centring chuck for a lathe, as set forth.

No. 27,599.—HIRAM H. SCOVILLE and D. R. FRASER, of Chicago, Ill., assignors to themselves and P. W. GATES, of said Chicago.—*Improvement in Quartz Crushers*.—Patent dated March 20, 1860.—The quartz being placed in the concave at each end and a weight placed in the box F, a reciprocating motion is imparted to the trough; the movement of the trough causes the quartz to be carried back and forth under the roller, and consequently it is first broken into small fragments between the pyramidal teeth of the concave and circumferential ribs of the roller, and then by the water is forced toward the centre of the concave, where it is pulverized by the longitudinal ribs of the concave and circumferential ribs of the roller; after which it discharges with the water through the screens or grates.

Claim.—Crushing quartz by the combined agency of a swinging concave trough B and a rising and falling roller D, substantially as set forth.

No. 27,600.—C. EDWARD SNEIDER, of Baltimore, Md., assignor to THOMAS POULTNEY, of said Baltimore.—*Improvement in Breech Loading Fire Arms*.—Patent dated March 20, 1860.—This invention consists, first, in a certain contrivance applied to a locking spring for the purpose of constituting a means of adjustment to make the said spring lock the breech joint tightly and compensate for the wear of the said spring, and the projections on the breech and barrel upon which the said spring acts. It consists, secondly, in certain improved means of raising the locking spring from the projection on the breech to unlock it and permit it to be opened for loading.

The inventor says: I *claim*, first, the combination, with the locking spring D, of the wedge *e*, the spring *f*, and the set screw *h*, the whole applied and operating substantially as and for the purpose specified.

Second. The lever F, applied in combination with the trigger guard and with the pin *j*, substantially as and for the purpose specified.

No. 27,601.—JOHN STOWELL, of Charlestown, Mass., assignor to himself and DANIEL F. WHITE, of said Charlestown.—*Improved Feed Water Regulator for Steam Boilers*.—Patent dated March 20, 1860.—The object of this invention is to control the action of the feed pump, either by shifting a belt which drives it from a loose to a fast pulley, and *vice versa*, on one of the shafts by which it is driven, or by operating on any other means of starting and stopping the pumps.

Claim.—The combination, with the float B and steam box A, of the slotted rod *b*, arm I,

valve C, vessel G, lever H, or its equivalent, and a loaded lever J, the whole applied and operating substantially as described.

No. 27,602.—STEPHEN USTICK, of Philadelphia, Pa., assignor to himself and JULIUS A. PEASE, of New York, N. Y.—*Improvement in Clay Pipe Machines*.—Patent dated March 20, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, constructing the die piece J, with perforations or openings *t* to be filled with cotton, wool, or other equivalent substance, in combination with the band or wrapper Y, substantially as and for the purpose described.

Second. The grooves or channels *u* in the die pieces G and H, to be filled with cotton or other suitable fibrous substance, or an equivalent, in combination with the sheaths *v* and *w*, for the purpose of lubricating the lips of the dies, as described and shown.

Third. The combination of the springs with the core M, for the purpose of holding the latter in its place during the formation of the bell end of the pipe, substantially as described.

Fourth. Combining and arranging the ring *c* with the mould L and core M, substantially as and for the purposes set forth.

Fifth. The combination and arrangement of the bevel piece *h* with the adjustable sliding frame *i*, as and for the purposes described.

Sixth. The cut-off ring O², in combination with the shifting rod O, or its equivalent, when arranged and operating in relation to the die I, substantially in the manner and for the purposes set forth.

Seventh. The safety chamber T, provided with the valve U, arranged and operating in relation to the clay cylinder B substantially as and for the purpose set forth.

No. 27,603.—C. J. VAN WYCK, of New York, N. Y., assignor to JOHN M. MACAULEY, of said New York.—*Improvement in Apparatus for Distilling Oil from Coal*.—Patent dated March 20, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The construction of a retort with a grate *c* in the bottom, and an inclined conductor E below such grate, as described, such conductor not being the outlet for the gaseous products of combustion of the fire by which the retort is heated.

No. 27,604.—A. L. O. WALL, GEORGE ROBERTS, and MILO S. CARTER, of Decatur, Ill.—*Improvement in Trucks for Mole Plough*.—Patent dated March 20, 1860.—This invention consists in supporting the beam upon wheels, the axles of which turn in bearings at each end of the beam, and are bent at their ends and in their centres, so that each wheel turns, as it were, upon a radius bar; it further consists in suspending the axle of the front wheels in an adjustable loop.

The inventors say: We *claim* the combination of the crank axles B B¹, link rods G, travelling plate F, and screwed spindle C, substantially as described, for the purposes set forth.

We also claim supporting the front axle in an adjustable bearing, when arranged and operating substantially as described, for the purpose set forth.

No. 27,605.—GEORGE W. N. YOST, of Yellow Springs, Ohio, assignor to G. W. N. YOST & Co., of said Yellow Springs.—*Improvement in Manufacture of Soap*.—Patent dated March 20, 1860.—The object of this invention is to prepare a powerful concentrated hard soap, convenient for transportation and readily convertible into soft soap and into suds by the addition of hot water.

Claim.—The described new article of manufacture, namely: hard soap, prepared in a state of minute subdivision, instead of bars or cakes, substantially as set forth, for the purposes described.

No. 27,606.—JAMES ADAIR, of Mendota, Ill.—*Improvement in Mole Ploughs*.—Patent dated March 27, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of two extensions above claimed, and a hinge-like connection whereby the coulter and mole are flexible upon each other horizontally, independently of one another, and immovable upon each other perpendicularly, as and for the purposes set forth.

No. 27,607.—JAMES W. ADAMS, of Pleasant Valley, Vt.—*Improved Stave Machine*.—Patent dated March 27, 1860.—This invention consists in the employment of concave and convex tsationary knives, pressure rollers, and a reciprocating bed, operated in a novel way, and the whole arranged for joint operation.

Claim.—The reciprocating bed H, operated by the pinion G and a movable rack K, and the supplemental yielding and rigid beds Q T, in connection with the concave and convex knives R S and pressure rollers N O P P, all being arranged for joint operation, as and for the purpose set forth.

No. 27,608.—T. F. ALLEN, of Dyersville, Iowa.—*Improvement in Brackets for Railroad Car Trucks*.—Patent dated March 27, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A suspension bracket D, which is capable of changing its bearing point, and which acts by reason of changing its point of bearing with a counteracting force against the lateral vibrations of the car body, substantially as and for the purposes set forth.

No. 27,609.—S. A. BAILEY, of New London, Conn.—*Improvement in Wringing Machines*.—Patent dated March 27, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the rubber rollers B B with the oscillating guide board D, for the purpose of washing and wringing the clothes, and at the same time directing the course of the water pressed from the clothes into either tub, substantially as set forth.

No. 27,610.—JOHN S. BARDEN, of New Haven, Conn.—*Improvement in Steam Pumps*.—Patent dated March 27, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the arrangement and combination of a steam engine, a pump, two valve chests, and two slide valves, in manner and so as to operate substantially as described and represented.

I also claim the combination and arrangement of the secondary piston with the main pump piston, constructed tubular, and having appliances substantially as described, by which it may be either attached to the main pump barrel or to the secondary piston, substantially in the manner and for the purpose as specified.

I also claim the improved balanced valve and its chest, made substantially as described, in combination with the pressure chamber *t*, furnished with an elastic bottom *u*¹, and applied to the valve and chest essentially in the manner and to operate as explained.

I also claim, in combination with the steam cylinder piston, the pump piston and the sliding box of the crank of the driving shaft, the two separate crossheads or guides for such box, and screws, or equivalents, so applied to such crossheads as to enable them either to be drawn together or forced apart, in manner and for the purpose specified.

No. 27,611.—JAMES F. BECKWITH, of South Alabama, N. Y.—*Improved Hub for Carriage Wheels*.—Patent dated March 27, 1860.—The claim and engravings explain the nature of this invention.

Claim.—So constructing two metallic plates A A, which are provided with grooves *a a*, that they will clamp and hold the spokes separate and distinct from each other on their edges, while they are allowed to bear and press against each other on their faces, substantially as and for the purpose specified.

No. 27,612.—HARKNESS BOYD, of New York, N. Y.—*Improved Trap for Water Closets*.—Patent dated March 27, 1860.—The claim and engravings explain the nature of this invention.

Claim.—As a new article of manufacture, the trap or bend for water closet and other pipes, cast in half sections as specified, whereby the metal is formed of additional thickness at the joints and parts exposed to strain or wear as set forth.

No. 27,613.—ADOLPH BROWN and FELIX BROWN, of New York, N. Y.—*Improved Sugar Crushing Apparatus*.—Patent dated March 27, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim* the arrangement of frames or plates, provided with knives or cutters on their underside, and hinged on one end to the frame of the machine, to produce an action similar to the blades of shears, in combination with a movable bed or carriage, for the purpose of cutting loaf sugar in small pieces, substantially as described.

We further claim the arrangement of two or more cutter frames, with their corresponding movable tables combined together, and situated behind or below each other, and giving to the latter a quicker motion than to those situated before them, substantially in the manner and for the purpose set forth.

No. 27,614.—WILLIAM BUSHNELL, of Easton, Penn.—*Improvement in Cultivators*.—Patent dated March 27, 1860.—A is a beam, to the back part of which a plough *a* is attached; B B are two beams, having similar ploughs *b b* attached to their back ends. These beams are connected by the joints *e* to the ends of the bars C C, which pass loosely through the beam, and are pivotted to it at about their centres. The bars are allowed to turn in the beam, the mortises through which they pass being sufficiently long to allow it. In the outer part of the beam A, a pulley D is fitted horizontally. This pulley has a toothed periphery, and a chain E passes around its outer side, the ends of said chain being attached to the front ends of the beams B B.

Claim.—The arrangement of the central beam A, movable bars B B, pivotted connecting bars C C, adjustable chain wheel D, chain E, and ploughs b, as and for the purpose shown and described.

No. 27,615.—M. L. BYRN, of New York, N. Y.—*Improved Corkscrew.*—Patent dated March 27, 1860.—This invention consists in combining with the gimlet screw a T handle, and forming the handle and screw in one piece or in two.

Claim.—The combined gimlet screw and handle formed in the manner and for the purposes described as a new article of manufacture.

No. 27,616.—CULLEN CASEY, of Goldsboro', N. C.—*Improvement in Cotton Cultivators.*—Patent dated March 27, 1860.—In the construction of this invention A is the beam, which is constructed of two pieces, and is attached by means of the bolt c and band e, for the purpose of enabling the mule or horse to walk on either side of the row, as may be desired. A¹ is the stock, a the handles, B the scraper, C the screw bolt connecting the front of the scraper with the beam A, b the bolt passing through screw bolt C. The scraper B is attached to the frame d.

Claim.—The arrangement of the beam A, scrapers B, groove B¹, and bolt G, with stock A¹, the whole constructed and operating as described, for the purposes set forth.

No. 27,617.—GEORGE E. CHENOWETH, of Baltimore, Md.—*Improvement in Harvesters.*—Patent dated March 27, 1860.—The claim and engravings give an idea of the nature of this invention.

The inventor says: I *claim*, first, the laterally adjustable arm G, pivotted to the frame, as described, for the purpose of changing the position of the inner end of the finger bar laterally in relation to the main frame, to facilitate the folding of the bar to the outside of the wheel, as set forth.

Second. The combination of the trunnion piece H and hinge piece I, with the arm G, pivotted as specified, for the purpose described.

Third. The adjustable side braces J, hinged to the frame, and operating substantially in the manner described.

Fourth. The finger bar, constructed of a tube or rod, in combination with the shanks or sockets of the fingers secured thereon, substantially in the manner described.

No. 27,618.—GEORGE COLLYER and A. HAMILTON PATTERSON, of Philadelphia, Pa.—*Improved Paddle Wheel.*—Patent dated March 27, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The sliding paddles D, shaped and arranged so that each paddle enters the water with a point, and as it enters presents a surface which gradually widens until the full breadth of the paddle is presented to the water, in combination with an eccentric track, secured to the side of the vessel on the inside of the space occupied by the wheel, as and for the purpose shown and described.

No. 27,619.—BALDWIN DAVIS and J. M. SCROGGIN, of La Grange, Ga.—*Improvement in Ploughs.*—Patent dated March 27, 1860.—A represents the handles; B the standard that supports the handles; C the shank or standard of the plough, with notches D in front for the purpose of adjusting and regulating the depth of the plough; E is a wedge to secure the standard firmly to the beam; F is a metallic plate placed on the upper side of the beam to form a durable catch for the indentations and notches D in the metallic shank C.

Claim.—The combination of the beam L, plate F, shank C, notches D, and wedge E, with the adjustable brace G, subsoil point I, and adjustable mould board J, the whole being constructed and arranged as and for the purpose described.

No. 27,620.—JAMES DAVIS, of Fayetteville, N. C.—*Improved Sewing Machine Stitch.*—Patent dated March 27, 1860.—This machine makes a stitch in the forward and also in the backward stroke of the shuttle; thus there is need of two loopers, as one is used when the shuttle is on one side and the other used when the shuttle is on the other side; the operation of one looper being required to form each stitch, hence the loopers alternate.

Claim.—The formation of the knot stitch, as represented in Fig. 3, substantially as described.

No. 27,621.—WILLIAM FRANK DEAN, of Baltimore, Md.—*Improvement in Saddles.*—Patent dated March 27, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The side adjustable pommel B, or its equivalent, in combination with a gentleman's saddle, for the purpose of converting the same into a ladies' saddle, substantially as set forth.

No. 27,622.—I. H. DOOLITTLE, of Ansonia, Conn.—*Improved Pipe Wrench*.—Patent dated March 27, 1860.—This invention consists in the use of a sliding box or sleeve, placed in the shank of the implement and provided with a tooth in connection with a rack formed at one edge of the shank, and an eccentric formed at the end of a hook which is attached to the sliding box or sleeve.

Claim.—The combination of the rack C, on the shank A, the sliding bar or sleeve D, fitted on the shank with tooth b, and hook E attached, the latter having an eccentric d formed on its inner end, all being arranged to operate as and for the purpose set forth.

No. 27,623.—JOSEPH L. DUTTON, SR., of Philadelphia, Pa.—*Improvement in Hoisting and Weighing Machines*.—Patent dated March 27, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the hoisting and lowering apparatus composed of the barrel D, the brake wheel H, and brake strap I, the latter being connected to one end of the hoisting rope F, and to the lever M, or its equivalent, in combination with the ratchet wheel W, and spring pawl x, the whole being arranged and operating substantially as set forth, so that the application of the brake for the retention of the weight in the position to which it has been hoisted is independent of the weight itself, as specified.

Second. The bar P, when connected to the hoisting rope F, and to the graduated lever V, substantially in the manner and for the purposes set forth.

Third. The sliding link Q, operated by the lever S, or its equivalent, and combined with the lever P, hoisting rope F, and brake strap I, substantially as specified, so that the operating of the brake strap and throwing in and out of gear of the weighing apparatus may be accomplished simultaneously by raising or lowering the said link Q, as specified.

No. 27,624.—DIEDRICH FEHRMAN, of Liverpool, England.—*Improvement in the Manufacture of Resin*.—Patent dated March 27, 1860.—This invention consists of a process for the production of an improved resin. In making this improved article the inventor says: I take common crude turpentine and place it in a room heated by steam or fire to a temperature of not more than one hundred degrees Fahrenheit, and then cause it to pass through a sieve made of copper wire tinned, or other suitable strainer; from this sieve or strainer it falls into another strainer of so fine a texture as to thoroughly remove all the mechanical impurities mixed with it. During this process the crude turpentine is not allowed to exceed the temperature above named.

Claim.—The combined process described, having for its object the manufacture of resin, as set forth.

No. 27,625.—LEVI FERGUSON, of Lowell, Mass.—*Improved Steam Trap*.—Patent dated March 27, 1860.—This invention consists in a novel arrangement of the valve, the diaphragm and the chamber relatively to each other and to the escape pipe, whereby the valve is rendered more sensitive and a freer escape for the water and sediment is provided than in most other steam traps.

Claim.—The arrangement of the annular chamber H h, in combination with the valve and diaphragm, substantially as described, for the purpose set forth.

No. 27,626.—EZEKIEL GROSS, of Goshen Hill, S. C.—*Improvement in Subsoil Ploughs*.—Patent dated March 27, 1860.—The claim and engravings explain the nature of this invention.

Claim.—In combination with the furrow plough and subsoiler, the curved brace uniting the beam, the standards, and the handles together, and when the subsoiler is made adjustable on the brace and beam, substantially in the manner and for the purpose set forth and explained.

No. 27,627.—CYRUS M. HALL and DAVID E. HALL, of Uniontown, Ill.—*Improvement in Cultivators*.—Patent dated March 27, 1860.—This invention consists in so constructing and arranging the several parts as to enable one person to guide the cultivator while he also drives the team.

Claim.—The general arrangement and combination of the revolving coulter with knife-edged arms, the shovels A made with flukes or barbs, the beams B B, the cross bar X, straps S, rollers r r, treadles P P, and the pin or pivot on which the beam B hangs, all connected as described and for the purpose set forth.

No. 27,628.—R. K. HAWLEY, of Baltimore, Md.—*Improved Construction of Circular Saws*.—Patent dated March 27, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A circular saw consisting of segments and backing plates constructed and united as described, and attached to the central flange, substantially in the manner set forth.

No. 27,629.—HENRY W. HERBERT, of Herbertsville, Va.—*Improvement in Marine Propellers*.—Patent dated March 27, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, adapting the outer form of the submerged portion of a vessel and the surface of the body of a propeller to each other, so that both together shall form a continuous outline, and at the same time only a portion of the propeller be exposed to the water, the other portion being enclosed within the body of the vessel, substantially as and for the purposes set forth.

Second. Providing each side of the ship with a curved shield H, in combination with a system of braces E E D C, for the purpose of protecting the propeller blades and of bracing together the main body of the ship and that portion of it which is behind the propeller, substantially as and for the purposes set forth.

Third. The application, in a propeller such as described, of the removable blades J, the tongues O of the blades fitting into dovetail grooves in the surface of the body of the propeller, substantially as and for the purposes set forth.

Fourth. Constructing the main side braces P of the ship so that they may be used as coal bunkers, substantially as and for the purposes set forth.

No. 27,630.—JESSE HANON, JR., of Taylorsville, Ill.—*Improvement in Drain Ploughs*.—Patent dated March 27, 1860.—A represents the beam of the plough, which is adjustable. Near the end of this beam a cutter or coulter C is secured which extends downwards, and is provided at its lower end with a mole D. The object of making the cutter adjustable, so that it will turn upon a centre like a rudder, is to guide the mole in any direction the operator may desire.

Claim.—The combination and arrangement of the rod E, coulter C, and slides G G¹, with the beam A and rod B, substantially as and for the purpose specified.

No. 27,631.—N. HOAG and WILLIAM H. TAPPEY, of Petersburg, Va.—*Improvement in Tobacco Screws*.—Patent dated March 27, 1860.—This invention consists in the construction of two plates with slots and key, for the purpose of supporting a heavy lever in tobacco press screws.

Claim.—The arrangement of the several parts combined as constituting the specific machine, for the purpose shown and set forth.

No. 27,632.—SAMUEL HOAKE, of Frederick, Md.—*Improvement in Cultivators*.—Patent dated March 27, 1860; antedated March 9, 1860.—This invention consists in having on the back part of the frame a shaft or bar extending across it, on which the shovels are jointed by the shaft passing through their eyes.

The inventor says: I *claim*, first, the combination of the jointed shovel shaft B, slotted shovels T T¹, drag bars D and d, shafts S, straps b, spring detent e, and guides g, substantially as described.

Second. In combination with the foregoing I claim the adjustment of wheels W on axle A by bolt a and pins i, as specified.

No. 27,633.—J. L. HOVEY, of Lockport, N. Y.—*Improvement in Pulley Blocks*.—Patent dated March 27, 1860.—This invention consists in projecting up from the top of the fixed double pulley blocks a hook having an eye in its end, into which is hooked a collateral block with one pulley or sheave, and over this sheave the draw or full rope is passed, leading from the movable block; the fixed pulley blocks are hung up by a swivel hook which hooks under the fixed block hook.

Claim.—The peculiar method of having blocks A D both being suspended from one hook and kept in an upright position by a projection H of the collateral block, thus obviating the friction occasioned by the pulleys getting twisted out of an upright position, as above described.

No. 27,634.—GEORGE W. HUNT, of Muscatine, Iowa.—*Improvement in Ploughs*.—Patent dated March 27, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement of a vertical coupling and adjusting pin I, which has that portion, which passes through the beam, round, and that portion, which passes through the axle, square, in combination with a diagonal adjusting bar P, a connecting rod N, and a vertical lever O, substantially as and for the purpose set forth.

Second. The arrangement of a long slot W in the axle, with an upper and under slotted sliding plate L L¹, and the coupling and adjusting pin I, substantially as and for the purposes set forth.

Third. The arrangement of the beam A, slotted axle D, coupling pin I, slotted plate L L¹, diagonal connecting rod V, adjusting bar P, lever O, driver's seat C, treadle M, plough F,

horizontal rotary land side wheel G, and rotary coulter H, in the manner and for the purposes set forth.

No. 27,635.—A. B. HUTCHINS, of Quincy, Fla.—*Improvement in Seeding Machines*.—Patent dated March 27, 1860.—The operation is as follows: The hopper G is supplied with seed, and as the implement is drawn along motion is given to said hopper through the medium of the teeth *b* and the arm J, in connection with the gravity of the hopper. The rod *e*, with its projections *g g*, cause the seed to pass uniformly out through the spout *d* of the hopper into the spout H.

Claim.—The vibrating hopper G, in connection with the agitator or clearer H¹ attached to the front part of the spout H and passing within the hopper and clearer, being arranged relatively with the spout H, substantially as and for the purpose set forth.

No. 27,636.—EDWIN JONES, of Chester Cross Roads, Ohio.—*Improvement in Harvesters*.—Patent dated March 27, 1860.—The nature of this invention is explained by the claim and engravings.

The inventor says: I claim hinging the frame E to the inside of the main frame, within the periphery of the wheel B¹, in combination with hinging the front to the main frame by the coupling arm M, substantially as and for the purposes set forth.

Second. The raker's seat D¹, arranged in relation to and combined with the main frame A A and frame E, substantially as and for the purposes set forth.

Third. The inclined plane *l*, in combination with the heel of the cutter bar, substantially as set forth.

No. 27,637.—FRANK G. JOHNSON, of Bellwood, Sag Harbor, N. Y.—*Composition to Prevent the Depredations of Insects*.—Patent dated March 27, 1860.—This invention consists in attenuating coal tar by coating with it common sand or saw dust, and afterwards rolling the sand or saw dust so coated in earth, ashes, lime, or guano, sufficiently so to deprive the coal tar of its adhesive or sticking properties.

Claim.—The composition and mode of attenuating coal tar or tar with sand or saw dust, and afterwards the coating of the sand or saw dust so tarred with earth, ashes, slaked or ground lime, plaster or guano, substantially in the manner and for the purposes described.

No. 27,638.—SAMUEL JOHNSTON, of West Shelby, N. Y.—*Improvement in Corn Huskers*.—Patent dated March 27, 1860.—This invention consists in making a hand corn husker, which is held and operated by one hand, in a manner similar to the operation of a pair of sheep shears, while the corn to be husked, either when picked or in stocks or standing on the hill, is held by the other hand.

Claim.—The corn husker herein described, consisting of fingers A B, crossbar E, knife D, and spring S, constructed and arranged to operate in the manner and for the purposes specified.

No. 27,639.—ALBERTUS LARROWE, of Cohocton, N. Y.—*Improvement in Self-acting Carriage Brake*.—Patent dated March 27, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination and relative arrangement of the rubber Z and swinging brake arm C¹ with the end of the brake bar V, whereby the strain upon the rubber Z is borne principally by the rigid end of the brake bar, directly in front of the periphery of the wheel, and not by the hinge of the rubber, substantially as shown and described.

No. 27,640.—JOHN B. LOGAN, of Blountville, Tenn.—*Improved Andiron*.—Patent dated March 27, 1860.—This invention consists in arranging the andiron with a bottom plate or frame, in combination with two upright angular bars, in such a manner that the same stands firmly in its place and allows a free circulation of the heat.

Claim.—The arrangement of the bottom frame A, or its equivalent, in combination with the angular bars B, or their equivalents, constructed and united substantially as and for the purpose described.

No. 27,641.—F. T. LOMONT and JOHN GROJEAN, of Masillon, Ohio.—*Improvement in Reaping and Mowing Machines*.—Patent dated March 27, 1860.—By turning down the lever J, the cord *a* draws the cutting apparatus up from the ground, so as either to regulate the height of cut or to raise it above obstacles in removing it from one point to another. By means of the bars D and C, the cutting apparatus may be inclined up or down for mowing or reaping or for adapting it to uneven ground just as circumstances may require.

Claim.—The arrangement of the hinged frame, consisting of the braces B B, and cross-

piece *e*, in combination with the segmental adjustable frame C, levers D and J, and chain *a*; all the parts constructed and applied in the manner and for the purpose specified.

No. 27,642.—PELLS MANNY, of Waddams Grove, Ill.—*Improvement in Harvesters*.—Patent dated March 27, 1860.—As the machine is drawn along, the rod D has a compound movement given to it by the wrist pin *a*, its slotted connection with lever E, and the friction roller *h*, which latter serves as a bearing for the rod, and causes its outer or back end to fall simultaneously with the rising of its front end. This movement of the rod D gives an intermittingly rising and falling movement to the lever E. The lever as it rises elevates the rake F, which is vibrated or moved over the surface of the platform I, by the rod G, the latter receiving its motion from the rod D.

Claim.—The arrangement of the wrist pin *a*, rod D, slotted as shown, and connected with the lever E, the friction roller or bearing *h*, and connecting rod G, arranged for joint operation as and for the purpose set forth.

No. 27,643.—ROBERT MCCAIN, of Rootstown, Ohio.—*Improved Washing Machine*.—Patent dated March 27, 1860.—The claim and engravings explain the nature of this invention.

Claim.—In a washing machine constructed substantially as described, the arrangement of levers and hand and foot bars of the pounding and of the rubbing parts of the machine, in their relation to the rubber and the pounder, and in their relation to each other, whereby the operator may move the pounder and the rubber by the foot and hands together, or by the hands alone, as set forth.

No. 27,644.—THOMAS B. MCCONAUGHEY, of Newark, Del.—*Improvement in Seed Planters*.—Patent dated March 27, 1860.—This invention consists in an arrangement whereby the operator is enabled to see the seed discharged, and also to cause the same to be properly distributed in the hills.

Claim.—The slide *f*, provided with the opening *g*, and the seed box A, with the partition *l*, arranged relatively with the slide and its opening *g*, as shown, in connection with the opening *d*, in the end piece *a* of the seed box, and the projection or scatterer *c* thereon, and the strip *m* on the seed box; all arranged for joint operation, substantially as set forth.

No. 27,645.—SAMUEL MCGREGOR, of Logansport, Ind.—*Improvement in Car Seats*.—Patent dated March 27, 1860.—This invention consists in having two backs attached to each seat, and connected by gearing, and having the upholstery connected with certain automatic mechanism, so arranged, that the backs may be more or less inclined and correspondently increased in height as desired, one being used as a support to the lower extremities of the occupants, and either used as a back, as occasion may require.

Claim.—The backs B B, attached to the seat A, and connected by the gearing E F, in connection with the stop N, arms or levers H, rods I, and slides J, connected to the bars D, of the backs and provided with the rollers K K¹, the seat and backs being provided with the continuous cushion L, passing around the rollers K K¹, with its ends attached to the backs B; all being arranged substantially as and for the purpose set forth.

No. 27,646.—HENRY NAPIER, of Brooklyn, N. Y.—*Improvement in the Manufacture of Resin*.—Patent dated March 27, 1860.—The still is arranged with two heads, so planned that either of them may be removed and the orifice closed when the other is in use. One of these heads is connected with a condensing worm or any efficacious form of condenser, the other with a receiver by a plain pipe. The still is heated by fire, or in any way by which a heat of about six hundred degrees Fahrenheit can be obtained, that is about the boiling point of oil. Passing into the still and forming a coil at its bottom, is a steam pipe connected with a boiler, and pierced so far as regards its coil, with small holes for the passage of the steam.

Claim.—The within described method of producing white resin at one continuous operation, substantially as set forth.

No. 27,647.—A. S. NOTESTEIN, of Salem, Iowa, assignor to L. J. ROGERS, of said Salem. *Improvement in Seeding Machines*.—Patent dated March 27, 1860.—The operation is as follows: The rollers B B break the clods and level the ground. A spout, which is placed under each seed box, follows and makes a furrow. The operator, by means of his feet, rocks the foot piece *a*, which communicates motion to the seed slide F, by the lever E, thus the seed are distributed in the desired places, while the coverers H H follow and cover the grain.

Claim.—The arrangement of the foot piece *a*, the rocking standard *d*, the lever E, and the seed slide F, with the rollers B and C, and coverers H H, when the several parts are connected and used substantially as and for the purpose specified.

No. 27,648.—JACOB NUESSELY, of Gowanda, N. Y.—*Improvement in Composition for Tanning Leather*.—Patent dated March 27, 1860.—This composition consists of pyroligneous or wood acid, and wood tar mixed with water, and a small quantity of muriatic acid, and with alum and catechu (japonica,) or some other substance which facilitates the tanning process, such as common bark liquor.

Claim.—The employment, for the purpose of tanning, of a composition consisting of the ingredients herein specified, and mixed together in about the proportions described.

No. 27,649.—E. T. ORNE, of Boston, Mass.—*Improvement in Gas Regulators*.—Patent dated March 27, 1860.—This invention consists in the employment of saw dust or wood filings as the filtering medium, and in a gas burner having the required facilities for adjusting the compression of the filtering medium.

The inventor says: I *claim* the employment of sawdust or wood filings as a filtering medium for gas burners.

I also claim, in combination with the use of said material, the above described burner, consisting essentially of the cylinder A, and ring f, operating substantially as set forth.

No. 27,650.—E. H. PHILO, of Halfmoon, N. Y., assignor to CHARLES E. PEASE, of Albany, N. Y.—*Improvement in Cider Mills*.—Patent dated March 27, 1860.—The apples being placed in the hopper K, and the levers D D moved up and down, the slice cuts them into strips, which passing down between H and J, upon C, are swept by its teeth right and left through the teeth a a, where they are torn into small shreds, which falling down between the rollers C, and the quadrants G, are thoroughly squeezed and pass down in juice, and their thin pomace into the trough T, fixed upon the bottom of the frame.

The inventor says: I *claim*, first, the cylinder C, operating with a liberating movement in connection with quadrants E and G, and with its teeth arranged to coöperate with teeth a a, affixed to partitions H and J, substantially as described and for the purpose set forth.

Second. The slicing apparatus S, operating as set forth, in combination with the cylinder C, and its coöperative apparatus as described, in the above specification.

No. 27,651.—WILLIAM R. SAUNDERS, of Buena Vista, Miss.—*Improvement in Ploughs*.—Patent dated March 27, 1860.—The beam A, handles B, braces C D and I, are of the usual form and construction. There are two ploughs attached to the beam, one on each side, for ploughing on both sides of the cane, corn, or cotton at the same time, by means of the perpendicular standards or rods I, secured to the landside or bar M, which pass through a perforation in the share, and are secured to the yoke E on the beam by means of screws or nuts. Each plough consists of a share F, mould board H, coulter G, and landside or bar M.

Claim.—The combination and arrangement of the shares F F, coulters G G, and movable mould boards H H, with beam A, handles B B, yoke E, and oblique brace K; the whole being constructed for operation as described.

No. 27,652.—J. F. SCHUFFENECKER, of Keokuk, Iowa.—*Improvement in Brick Moulds*.—Patent dated March 27, 1860.—The inventor says: Place the moulds upon the drying floor without shaking, reverse the lock bar O, push the cross parts of the levers D towards the ends of the moulds, take hold of the handle of the moulds, and deliver the bricks; put the moulds upon the drying floor at the rear end of the bricks, reverse the lever D, and secure it by the lock bar O, and the mould is ready to be sanded and filled.

Claim.—Operating the bottoms of the moulds by means of the lever D, rod F, wedges J J o, cogs I I o, slide K, and lock bar O, in the manner and for the purpose specified.

No. 27,653.—ROBERT T. SMART, I. W. SMART, and A. I. SMART, of Troy, N. Y.—*Improvement in Manufacture of Straw Paper*.—Patent dated March 27, 1860.—This improvement will be understood from the claim. A detailed description would require too much space to be given here.

Claim.—The method specified of treating straw or similar vegetable fibre for making white paper by the successive operations of boiling, washing, and separating or beating, and then applying the chemicals used for bleaching to the pulp, substantially as set forth.

No. 27,654.—GEORGE SMITH, of Baltimore, Ohio.—*Improvement in Cultivators*.—Patent dated March 27, 1860.—The chains or ropes I I are fastened to the front side of the teeth F F, and also to the roller J, which is arranged to turn in brackets fastened to the axle B and to the hounds D D, and has the lever K fastened in it, so that by raising the lever and winding up the ropes they raise the points of the teeth.

Claim.—The arrangement of the hinged teeth F, shanks G, ropes or chains I, roller J, and lever K; the whole being arranged for joint operation as described, for the purposes set forth.

No. 27,655.—S. F. VAN CHOATE, of Yreka, Cal.—*Improved Magnetic Telegraph*.—Patent dated March 27, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the employment, in combination with the escapement which controls the operation of the mechanism which drives the type wheel of the two electro-magnets E E, arranged in the same circuit, a permanent magnet G, combined with one of such electro-magnets as described, and the two armatures E¹ F¹, attached to a lever so applied relatively to the said magnets and escapement as to be operated substantially as described, to control the escapement by the opening and closing of the main or through current of a line of telegraph.

Second. I claim the employment, in combination with the electro-magnet W of the printing circuit, and the permanent magnet V, that is combined therewith, of a circuit breaker, composed of a ratchet toothed wheel 42, and lever 41, or their equivalents, applied and operating substantially as described, to cause the opening of the printing circuit while the type wheel is in motion, and the closing of the said circuit on the stoppage of the type wheel, substantially as described.

Third. I claim combining the lever which carries the armature of the printing magnet with the printing mechanism by means of a notched wheel Y, sliding bolt 52, cam 56, and spring 60, attached to said wheel, and a stop pawl 50, or their equivalents; the whole applied and operating substantially as described, to cause the unlocking of the mechanism, which brings the printing roller into operation on the stoppage of the type wheel, and the relocking of the said mechanism after the printing operation.

Fourth. I claim the employment, in combination with each other and with three separate branches of the same main circuit, of a key O, an intermitting wheel J, a check plate K, and a system of magnets E F G; the whole operating together substantially as described, for producing the synchronous operation of all the type wheels on a line of telegraph, and effecting the stoppage thereof in a position to present to their respective printing apparatus the letter corresponding with the depressed key.

Fifth. In combination with the key, intermitting wheel, check plate, and system of magnets, and the three separate branches of a main circuit as described, I claim the printing circuit breaker, and the branch circuit, longer than the printing circuit, formed by the coiled wire 14 or its equivalent; the whole operating as and for the purpose specified.

No. 27,656.—WILLIAM TALLMAN, of Providence, R. I.—*Improvement in Horse Shoe Nail Machines*.—Patent dated March 27, 1860.—The object of this improvement is to make the heads of the nails as large as are required, by constructing, arranging, and operating the parts connected with making the head in such a manner as to form a case or mould, enclosing the end of the blank and heading punch on all four sides, so that as the punch advances in the case to the head of the nail by upsetting the end of the blank the metal will be completely confined within the case.

Claim.—The top die, performing the two functions of discharging the nail and forming the top of the case, in combination with the stationary cutter, movable cutter, and bottom die; the said bottom die having its face extended to a suitable distance, and in proper form for the underside of the case, all arranged and operated substantially as described.

No. 27,657.—JAMES TEACHOUT, of Waterford, N. Y.—*Improved Die Stock*.—Patent dated March 27, 1860.—The inventor says: In order to produce a die stock, I simultaneously and equally slide the three dies c c^1 c^2 toward the centre in the body D of the stock, by means of a screw e fitted to turn in the stock and press against a follower f which bears against the back end of one die c , and also forces inward two other followers g g^1 against the back ends of the two other dies c^1 c^2 , the stock D being constructed and the dies and followers held therein by a removable cover h formed and arranged so as to be moved by the screw.

Claim.—The combination of the screw e and followers f g g^1 with the dies c c^1 c^2 and stock D, constructed and arranged substantially as set forth.

No. 27,658.—SAMUEL D. TILLMAN, of New York, N. Y.—*Improved Mode of Making Pavement*.—Patent dated March 27, 1860.—The nature of this invention is explained by the claim and engravings.

Claim.—A pavement whose surface is composed of alternate elevations and depressions substantially equal in number and surface, and nearly rectangular, the depressions being only long enough easily to admit either cork of the horse shoe, all their sides nearly vertical and the longest sides nearly crosswise of the street, thus giving sure foothold at the shortest possible intervals, while the wheel runs smoothly upon the elevations without falling into the depressions, as described.

No. 27,659.—MARK SNOW, of Auburn, Miss.—*Improvement in Cotton Cultivators*.—Patent dated March 27, 1860.—This invention consists in attaching two scraping mould boards d to the front part of the body of the plough in such manner that one shall travel on each side of the row to scrape the ridge and throw the scrapings into the centre of the furrow, where they

will be covered by the earth thrown upon them by the rear parts of the scraping mould boards; two hilling mould boards *e* are secured to the rear of the frame, and are so arranged as to cut deeper than the scraping mould boards and to throw the earth inwards upon the plants after the ridge has been scraped; shield plates or fenders *g* are secured to the rear end of the plough beam and project downwards on each side of the row.

Claim.—The combination of the scraping mould boards *d*, hilling moulds *e*, and fenders *g*, when arranged and operating substantially as described.

No. 27,660.—C. W. WAILEY, of Lexington, Ky.—*Improvement in Ties for Cotton Bales.*—Patent dated March 27, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The lugs *a*, in combination with the spaces *b* formed at the edges of the loop and extending any required distance from the ends, so as to unite and form a tie, substantially as set forth.

No. 27,661.—EDWARD B. WEAKLEY, of Pana, Ill.—*Improvement in Seeding Machines.*—Patent dated March 27, 1860.—This invention consists in the employment or use of seed distributing devices and share frames attached to a metal frame and so arranged that seed may be planted in hills or drills, and the ground also pulverized and freed from weeds, the machine being used for either purpose separately, as may be required.

Claim.—The swinging frame *G*, provided with the seed distributing devices, expanding and vertically moving bars *k k*, and shares *h¹ j¹*, and attached to the mounted frame *A* by joints or hinges *h* at its front end, and by the chains or cords *r s* and bar *F* at its back, all being arranged as and for the purposes specified.

No. 27,662.—R. A. WILDER, of Schuylkill Haven, Pa.—*Improvement in Feed Water Apparatus for Locomotive Engines.*—Patent dated March 27, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement, substantially as shown and described, in connection with the feed and overflow pipes and pump, of a two-way cock, so that while a constant circulation of water is maintained in said pipes, only such portion thereof as may be desired shall enter the boiler, all as set forth.

No. 27,663.—SETH D. WOODBURY, of Lynn, Mass.—*Improved Reclining Chair.*—Patent dated March 27, 1860.—This invention consists in uniting the arms *D* and *G* by means of the connecting rod *F*, one end of which is provided with a thumb screw *f* that slides over a slotted piece *E* attached to the under side of arm *D*, by means of which arrangement the chair can readily be confined by the person sitting in it in any desired position or degree of inclination; also in the arrangement and combination of the folding legs *A A¹* and jointed strips *H* and *I*, with the other parts of a reclining chair, so that it can be readily folded up.

Claim.—The combination and arrangement of the arms *D* and *G*, seat *B*, slot *e*, connecting rod *F*, set screw *f*, supporting arms *J*, and leg rest *K*, with the folding legs *A A¹* and jointed strips *H* and *I*, substantially as set forth and for the objects specified.

No. 27,664.—JOSEPH D. BILLINGS, of Rutland, Vt., assignor to himself and E. A. KEENE, of Chapin, N. H.—*Improved Speed Register.*—Patent dated March 27, 1860.—The nature of this invention will be understood by the claim and engravings.

The inventor says: I claim, first, the arrangement of the circular rack *D*, actuated by any suitable governor, pinion *d*, stem *e*, and index heads *f g*, the latter having a pin *h* projecting from it, by which it is moved over the surface of the dial plate, when the same are combined in the manner and operated as set forth.

Second. I claim, in combination with the striker *k* on the rack *D*, the levers 1 2 3 4 and pawls *l*, ratchet wheels 1¹ 2¹ 3¹ 4¹, (more or less, as may be desired,) with their pins *U*, rods *H*, with their arms, the whole arranged and combined essentially as represented and described.

Third. I claim the wheel *N*, with its lever and pawl receiving a direct motion from the spindle *A*, arranged in such a relation to the point or needle *S²*, that said needle will register every mile passed over by the train of cars, as described; and, in combination therewith, I claim the spring rod *M*, pawl *R*, ratchet wheel *R¹*, and spool *L¹*, for moving the strip of paper upon which the speed and miles are registered at each revolution of the wheel *N*; all arranged in the manner and for the purposes set forth.

No. 27,665.—PHILOS BLAKE, of New Haven, Conn., assignor to BLAKE BROTHERS, of said New Haven.—*Improved Corkscrew.*—Patent dated March 27, 1860.—This invention is a new and improved manufacture of cork extractor, as made not only with a lever head applied to its lifting screw, but with a lever screw nut applied on such screw and to the cap of the neck

stand, in such manner that it may rotate and screw on the lifting screw and either rotate against or within the said cap.

Claim.—The improved cork extractor, as made with a lever head D affixed to its lifting screw C, and with a lever screw nut E applied to such screw C and to the cap of the neck stand, substantially as described and represented in the accompanying drawings.

No. 27,666.—THOMAS B. DE FOREST, of New York, N. Y., assignor to himself and WALLACE & SONS, of Ansonia, Conn.—*Improvement in Lanterns.*—Patent dated March 27, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* connecting the ends of the vertical guard wires to the top and bottom portions of the lantern, by bending them into such form as to interlock with said top and bottom parts and be secured thereto by encircling or keying bands, or their equivalents, substantially in the manner set forth.

I also claim so bending the vertical guard wires as to form in them eyes, as described, in combination with the encircling horizontal guard wire passing through the said eyes, the whole constructed and operating substantially as specified, for the purposes set forth.

I also claim arranging the encircling guard wire *p* in such manner as to be capable of sliding circumferentially in its bearings in the vertical guards, in combination with the coupling nut *c*¹, so connected with said guard *p* that by turning it the said guard wire may be distended or contracted, substantially as set forth, for the purposes described.

I also claim, in combination with the top cap of the lantern and handle, the connecting link *o*, so formed of a single piece of wire as to effectually connect or couple the lantern cap to the handle and properly support the protector without the aid of any coupling pin or other auxiliary part, as hereinbefore explained.

I also claim forming in the handle, when made of flat metal, a loop *e* to operate in connection with the upper end of the link *o*, as specified, for the purpose set forth.

No. 27,667.—ROBERT W. GERAGHTY, of Newark, N. J., assignor to himself and WILLIAM M. SIMPSON, of said Newark.—*Improved Ventilating Spring Mattress.*—Patent dated March 27, 1860.—A is the frame; *b b* are spiral springs; *c c* is a cord passing around the frame A and secured on each side thereto, and securely attached, above and below, to the top and bottom of the springs *b b*. The cords *c c* and *d d* hold the springs *b b* in their appropriate position and ready at all times for action on either side, and from above or below, while the same cords also sustain the said springs, at all times, in exact and approximate relation to the frame A.

Claim.—The combination and arrangement of the frame A with the springs *b* and cords *c* and *d*, sack E, hair K, and outer cover *m*, substantially as and for the purposes specified.

No. 27,668.—HENRY HEWITT, of San Francisco, Cal., assignor to W. A. SANFORD, of Pottsdam, N. Y.—*Improvement in Seeding Harrows.*—Patent dated March 27, 1860.—The object of this invention is to obtain a rotary harrow, which may be used alone, or with a seeding machine, and be adapted for operating at a greater or less depth in the earth, as the nature of the earth may require.

Claim.—The arrangement of the axle A, bars *h h*, shaft *g*, cylinders *i i*, bearing *j*, arm *k*, holes *l l*, wheels B B, pendants *d d*, frame C, castor wheel D, seed boxes E E, and slide F, as and for the purpose shown and described.

No. 27,669.—JAMES HOTCHKISS, of Yellow Springs, Ohio, assignor to himself and E. P. H. CAPRON, of said Yellow Springs.—*Improvement in Drain Tile Machines.*—Patent dated March 27, 1860.—The die plates D D are hinged at their lower edges to the block *d*, or bottom of the vessel as at *h h*, so that they may be turned down. As the tile thread is produced, it is received upon an endless belt or apron, and moving in a horizontal or nearly horizontal position. The tiles are cut off by a fine wire stretched upon a frame, which passes quickly down, and cuts off the continuous tile thread.

Claim.—The combination and arrangement of the spiral wings *h h*, situated on the pug mill shaft, the wedge-shaped dividing step block *d*, and inclined or obliquely situated die plates D D, constructed as described, substantially in the manner and for the purposes specified.

No. 27,670.—JACOB F. HUNTER, of New York, N. Y., assignor to himself, H. A. HUNTER, and P. P. KELLER, of said New York.—*Improvement in Hot Water Apparatus.*—Patent dated March 27, 1860.—This invention consists in a novel arrangement of pipes with a water back, said pipes communicating with the radiators in the building from the top of the apparatus, and said radiators communicating with the water back by a return pipe.

Claim.—The combination of the coils F G, with the main pipe J, fire back A, return pipe J¹, and casing K, when the said coils are both connected with the main pipe J, and back A, and otherwise constructed as shown and described, for the purpose set forth.

No. 27,671.—CHARLES MILLER, of New York, N. Y., assignor to himself and GEORGE RICARDO, of said New York.—*Improvement in Machinery for Manufacturing Piled Fabrics.*—Patent dated March 27, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the employment, in the manufacture of piled fabrics, of a series of needles *a a* for passing the pile threads through a previously woven foundation in rows of loops, and of a single needle *N* operating transversely to the said series of needles, for the purpose of carrying a continuous filling or locking thread through the successive rows of loops of the pile threads, substantially as specified.

Second. The employment, in combination with the series of pile thread needles *a a*, and the filling or locking thread needle, of a tongue *u*, applied and operating substantially as described, to catch and prevent the withdrawal of the filling or locking thread.

Third. The attachment of the nippers 9, which draw the rods from the pile, to the same slider *Q*, or its equivalent, which carries the locking or filling thread needle *N*, so that the same mechanism serves to operate the said nippers and the needle, substantially as described.

Fourth. The combination of the nippers 11, and the stop 12, with the nippers 9, the whole operating together substantially as and for the purpose set forth.

Fifth. The combination with the two pairs of nippers 9 and 11, of the stop 12, the inclined plane 13, the recess 14, and the pusher 15, the whole operating together substantially as and for the purpose specified.

Sixth. Feeding the foundation *i* to the needles, and carrying away the finished piled fabric from the needles by means of a plate *K*, or its equivalent, pushing against the rods 7 7, substantially as described.

No. 27,672.—C. L. NELSON and OSCAR BOSTWICK, of Burlington, Vt., assignor to themselves and N. B. PROCTER, of said Burlington.—*Improvement in Wood Bending Machines.*—Patent dated March 27, 1860.—*S S* represents screws working in connection with the boxes of the shaft *A*¹, by means of which the wheel *A*¹ may be thrown out of gear with it, (*A*), and set at any distance from *A* in order to suit various sizes of timber. *B* is a wheel hung to guide *C* so as to press on the timber being fed. *B* is arranged to be raised and lowered by means of the set screws *d*. The guide *C* may be regulated by the screws *c c*.

Claim.—The adjustable guide, marked *C* in the drawing, and adjustable roller *B*.

No. 27,673.—ROBERT ROSS, of St. Albans, Vt., assignor to himself and GEORGE J. STANDARD, of said St. Albans.—*Improved Horizontal Water Wheel.*—Patent dated March 27, 1860. The object of this invention is to obtain a centre-vent water wheel, that may have its capacity readily varied according to the power required, and a uniform speed obtained with a varying power as occasion may require.

The inventor says: I *claim* the arrangement, in a centre-vent water wheel, of the plates *D E* fitted respectively into the scroll and to the wheel, as described, and connected to the frame *G*, to operate as and for the purpose set forth.

I also claim, in connection with the above, the projection *h* at the end of the plate *D*, when fitted in the socket *i* to leave a space *j*, between the projection and the back part of the socket, for the purpose specified.

No. 27,674.—H. D. WALCOTT, of Boston, Mass., assignor to H. WILLIAMS, of said Boston.—*Improvement in Eylet Machines.*—Patent dated March 27, 1860.—The two levers *A B* pivotted together at *a*, form a pair of pincers, the jaws *b c*, of which are widened out at their ends. The jaw *b* has attached to it at one corner the cylindrical plunger *e*, and at the other corner the setting punch or die *f*. To the inner face of the jaw *c* is pivotted, at 5, a piece *g*, which is free to oscillate towards either side of this jaw, except when confined by a thumb screw *h*, passing through a curved slot *i* in the jaw, and screwing into the piece *g*.

The inventor says: I *claim* the nippers *A B*, having their jaws *b c* provided with both a punch or cutter, and a closing or setting die, substantially as described.

Second. I claim the adjustable piece *g*, operating substantially as specified.

No. 27,675.—JOHN R. ALBERTSON, of East Deer Township, Pa.—*Improvement in Garden Hoes.*—Patent dated April 3, 1860.—The opening *A* of the blade is placed over the shoulder *C* of the shank *b*, the large opening *x* of the washer *e* is then placed over the dovetail, and then shoved down so as to secure the blade to the shank of the handle.

Claim.—Shank *b*, shoulder *c*, dovetail *d*, washer *e*, blade *a*, with the opening *A*; the whole being constructed and arranged as and for the purpose set forth.

No. 27,676.—EDWARD H. ANDERSON, of Easton, Md.—*Improvement in Vapor Burners.*—Patent dated April 3, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the original arrangement of the apparatus set forth, and the new and useful adaptation of them to the purpose of producing a light which will be econom-

ical in cost, and which will be entirely exempt from the danger attending many other gas lamps.

I also claim the invention of a new and useful mode of procuring light by the combined action of atmospheric air and heat, by means of my original adaptation of the jet holes N N in the upper end of the conducting pipe A acting upon the under surface of the chamber D, the plow pipe principle of the jets producing the requisite heat to manufacture the gas as required for the support of the flame, and which combination enables me to raise the flame above the entire apparatus, thus rendering it clear of all obstructions; all constructed and operating as set forth.

No. 27,677.—EDWARD ARMSTRONG, of Pittsburgh, Pa.—*Improvement in Governor Valves of Steam Engines*.—Patent dated April 3, 1860.—This invention consists in dividing the valve chamber of governor valves of steam engines into two compartments, and in so arranging and balancing two valves, that an equal pressure of steam is made to act on each valve, thereby equally balancing them.

Claim.—Dividing the valve chamber of governor valves into two compartments, by means of the division plate *c*, provided with valves *j* and *i*, constructed, arranged, and operated in the manner described and for the purpose set forth.

No. 27,678.—A. MERRITT ASAY and J. LAMBERT ASAY, of Philadelphia, Pa.—*Improved Method of Fastening Artificial Teeth*.—Patent dated April 3, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We claim fastening artificial teeth to a metallic plate by interposing between the said teeth and plate a strip of vulcanizable gum and vulcanizing or hardening the same, the teeth having been adjusted to the plate, as set forth.

We also claim packing with gum the interstices between the teeth and plate, or between the teeth themselves, when secured to the plate by rivetting or any other of the usual modes, and vulcanizing or hardening the packing after it has been adjusted, as specified.

No. 27,679.—GEORGE K. BABCOCK, of Utica, N. Y.—*Improvement in Measuring Faucets*.—Patent dated April 3, 1860.—This invention consists in applying a weighing device to a faucet in such a way that the substance to be drawn may be measured by weight, and the flow of the substance be cut off automatically by the gravity of the same when the proper or desired quantity has passed into the vessel prepared to receive it.

The inventor says: I claim connecting to the slide or valve of a faucet a scale beam or weighing device, arranged to operate as shown, or in any equivalent way, so that the substance to be drawn may be measured by its weight.

I further claim the combination of the scale beam I, pawl or catch H, arm F, lever D, and valve rod C, with its valve B, fitted within the tube A, all arranged for joint operation, substantially as and for the purpose set forth.

No. 27,680.—JOHN BAILEY and JOHN DE CAMP, of Cincinnati, Ohio.—*Improved Spring Bed Bottom*.—Patent dated April 3, 1860.—B are transverse pieces framed into the pieces A so as to form the frame of the bottom; D are conical coiled wire springs, their lower ends *d* being suitably bent for insertion into the pieces B, and their upper ends *d*¹ being bent so as to form a bearing for the slats C, and for insertion into the loops *b* of the straps E.

Claim.—The arrangement of the side rails A, transverse rails B, springs B *d d*¹, slats C, and straps E, the whole being constructed and combined in the manner and for the purposes set forth.

No. 27,681.—W. M. BAKER, of Walpole, Ind.—*Improved Refrigerator*.—Patent dated April 3, 1860.—This invention consists in the arrangement of a piece of canvas or other fibrous material over the corrugated or slatted inclined sides *b* of the case A, in combination with a perforated reservoir C on the top, and a receptacle D on the bottom, in such a manner that water or other fluid poured into the reservoir on the top is spread by the canvas over an extended surface where it is evaporated.

Claim.—The arrangement of a sheet B of canvas or other fibrous material in combination with the grooved and perforated or slotted sides *b* of the case A, and with the reservoir C, or its equivalent, constructed and operating substantially in the manner and for the purpose specified.

No. 27,682.—L. B. BATCHELLER, of Rochester, N. Y.—*Improvement in Machines for Manufacturing Barrel Heads*.—Patent dated April 3, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim the combination and arrangement of the passive disk C, with the clamping disk C¹, hollow cam shaft G, and foot lever L, together with the cord J, for

actuating the saw table U, simultaneously with the clamping of the staves, and the pawl and lever P, operating conjointly, substantially as and for the purposes set forth.

I further claim the application of the lugs or hooks *k k*, to the clamping disk C¹, for the purpose of sustaining the staves while being supplied to the disks, substantially in the manner set forth.

No. 27,683.—H. N. BILL and J. C. BILL, of Willimantic, Conn.—*Improvement in Scales*.—Patent dated April 3, 1860.—This invention consists in the employment of a gravitating arm or lever arranged and supported on knife edges, and connected to the scale beam by a vertical rod, which is hung and supported to the short arm of the weighted lever and base of the scales.

The inventors say: We claim, first, the combination of the weighted lever D D¹, dependent rod E, vibrating rod F, perpendicular scale rod G, and swinging arms J, arranged and combined substantially as described and represented.

Second. We claim the slotted index hand L, hung on an isolated centre from the fulcrum of the weighted lever D, in the manner and for the purposes set forth.

No. 27,684.—BENJAMIN F. BOND, of Cambridge, Mass.—*Improved Construction of Clock Weights*.—Patent dated April 3, 1860.—The groove *c* is formed by placing the ball C in a lathe and turning out the groove, the bottom of the groove is turned smooth and true, so that the cord rests upon it, and, as the weight falls, it rolls over on the cord making its revolutions on an axis passing through the centre of the sphere at right angles to the groove *c*.

Claim.—The improved clock weight described, having a groove around its circumference for the reception of the cord, as set forth, for the purpose specified.

No. 27,685.—FRANCIS B. BOWMAN, of Waltham, Mass.—*Improvement in Scissors*.—Patent dated April 3, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim making the clasp spring, with the separate pivots applied to it, and to enter the joint holes of the separate blades, as specified.

I also claim the arrangement of the clasp spring with respect to the blades and their handles, as specified.

No. 27,686.—EDWARD BROWN, of Waterbury, Conn.—*Improved Curtain Fixture*.—Patent dated April 3, 1860.—This invention consists in having a cord wound around the shaft of the shade roller, and having a circular disk attached to the roller shaft, the disk being used in connection with a clamp which is actuated, or adjusted, by the manipulation of the cord so as to admit of the shade being wound up or lowered and retained at any desired height.

Claim.—The disk wheel D, attached to the journal *a* of the shade roller A, in connection with the clamp, constructed substantially as shown, and connected with the cord E, which is wound on the journal *a* of the shade roller; all being arranged to operate as and for the purpose set forth.

No. 27,687.—JOHN BROWN, of New York, N. Y., and CHARLES R. ELLIS, of Brooklyn, N. Y.—*Improved Means of Regulating the Draft to the Fire in Warming Apparatus*.—Patent dated April 3, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We claim regulating the amount of air draft admitted to the fire in hot water and other warming apparatus, by causing the overflow of water induced by ebullition to pass into a suitable vessel and regulate the draft passing through the fire, or the supply of cold air above the fire, or both, by the float and dampers, or any suitable device, as specified.

We also claim opening the draft to the fire after ebullition ceases by the withdrawal of the water from the overflow vessel into the warming apparatus through the syphon, or its equivalent, substantially as set forth.

No. 27,688.—WILLIAM G. BROWN and FREDERICK MCKEE, of Birmingham, Pa.—*Improvement in the Manufacture of Iron*.—Patent dated April 3, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We claim, first, carrying the steam to the pipe G, in which it is to be superheated through a pipe L, smaller in bore than the bore of the pipe G, substantially in the manner and for the purpose set forth.

And we also claim so arranging the pipe G with regard to the furnace as that, while it is heated by the fire in the furnace, and shall jet its heated contents through or over the burning products therein, it shall be duly protected from the intensity of the said fire, substantially as set forth.

No. 27,689.—JESSE BURROUGHS, of Ridgeway, Pa.—*Improvement in the Purification of Coal and Ores*.—Patent dated April 3, 1860.—The claim explains the nature of this invention.

Claim.—Preparing coal for burning and ore for smelting by steaming it with a liquid composition of water, salt, nitre, potash, and lime, in the proportions substantially as set forth.

No. 27,690.—TYRANNUS P. BUTTERFIELD, of Indianapolis, Ind.—*Improved Device for Tilting the Bolt in Shingle Machines.*—Patent dated April 3, 1860.—The rest or vibrating table G is designed for the shingle blocks, and is operated by the spring H and guide or slide plate I, which rests on or is held up against the cross frame J by the spring H.

Claim.—The oblong plate J, in combination with the spring catch k, for the purpose of operating the table G, when used in connection with the knife frame, substantially as set forth.

No. 27,691.—PIETRO CINQUINI, of West Meriden, Conn.—*Improvement in Files.*—Patent dated April 3, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Constructing a file with longitudinal grooves and a transverse cut, combining with said grooves to form teeth, substantially as described.

No. 27,692.—ELIZUR E. CLARK, of New Haven, Conn.—*Improvement in Apparatus for Building Concrete Walls.*—Patent dated April 3, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combinations of the frames and sheeting boards with the braced uprights or inverted T's, when combined with each other and with the walls and floor timbers, in the manner described, and for the purpose stated.

Second. The cores shown in Figs. 4 to 21, inclusive, made as described, either whole or in separate parts, said cores being provided at suitable intervals either with core points to form recesses in the wall for the reception of the binders or with notches to fit upon the binders, and allow their lower edges to extend down between the said binders to meet that part of the wall which is already built, substantially as set forth.

Third. The combination of the rebated corner stays or guides O with the sheeting boards, as described, for the purpose stated.

Fourth. The combination with the frames A B and sheeting boards E of the lining plates d, of wood or metal, when placed inside of the sheeting boards to facilitate the raising of the frames, as stated.

Fifth. The combination of the cleats P P¹ P² and boarding Q Q¹ Q² with the frames which support the sheeting boards, for the purpose of forming string courses, water tables, and other continuous projections, as stated.

Sixth. The combination of the covering piece S and the fillet R with the perforation in the sheeting boards, for the purpose of forming window sills, caps, &c., as stated.

Seventh. So constructing the frames which hold the sheeting boards that the connection of the two sides shall be made entirely above the work, so that the concrete boxes may be raised by simply loosening the bolts which hold them together, and without any connection through the wall, as stated.

No. 27,693.—P. J. CLARK, of West Meriden, Conn., assignor to S. S. CLARK, of said West Meriden.—*Improvement in Cigar and Match Cases.*—Patent dated April 3, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Forming a box or case by means of an outer shell furnished with guides, loops or slides, and two heads united by strips or ribs, the said strips or ribs passing through the guides, and the guides and heads limiting the extent to which the box may be opened and its contents raised up, to be easily taken hold of, as represented.

No. 27,694.—P. S. CLINGER, of Conestoga Centre, Pa.—*Improvement in Hand Cultivators.*—Patent dated April 3, 1860.—This invention consists in the arrangement of the hinged bar, cultivator teeth, roller, handle, and stop or check plate, in the manner and for the purposes desired.

Claim.—The arrangement of the hinged head piece or bar A, cultivating teeth B, roller C, handle D, and check plate E, substantially as and for the purposes set forth.

No. 27,695.—EZRA COLEMAN, of New York, N. Y.—*Improvement in Attaching the Grinding Surfaces of Quartz Mills.*—Patent dated April 3, 1860.—This invention consists in a ready and direct attachment of the grinding surfaces, and also in the means employed for regulating the positions of said grinding surfaces towards each other, by which means the same are trued.

The inventor says: In combination with the hollow shell A, provided at its end with suitable shaft bearings, the shaft G, and detachable grinding surfaces E and F, I *claim* the longitudinally acting screws l l l and the radially acting and concentrically adjusting screws f f and h h, the whole arranged, constructed, and operated substantially as and for the purpose set forth.

No. 27,696.—JOHN COOK, of Buffalo, N. Y.—*Improvement in Lathes*.—Patent dated April 3, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Placing the tool N in a sliding box M, operated by the shaft O, screw rods g^1 g^1 , and bar f^1 , for the purpose of readily adjusting the turning tool with the stick and permitting the tool to be operated by the pattern, as described.

No. 27,697.—J. C. COOKE, of Middletown, Conn.—*Improvement in Welding Wrought Iron*. Patent dated April 3, 1860.—This invention consists in the employment of a suitable portable apparatus, which may be clamped at any convenient points to the sheets of metal undergoing the operation of welding, and may be rigidly held in place when required or moved along as the operation proceeds; which may be clamped to plates of various thickness or of any curvature; this apparatus consisting of one, two, or more suitable hammers or pressure rollers and a suitable heating media, for heating the surfaces to be welded to the welding point, at the same time excluding atmospheric air, so that the surfaces will not oxydize.

Claim.—The portable welding apparatus constructed and operating upon the principles described, wherein the heating and hammering or rolling operations are suitably combined and placed under the control of the operator, substantially as set forth.

No. 27,698.—JOHN P. COOPER, of Finleyville, Pa.—*Improvement in Machines for Overcoming the Dead Points of the Crank*.—Patent dated April 3, 1860.—This invention consists in the use of a double rack, slide, wheel, springs, and stops, arranged and combined for the purpose of overcoming the dead points of the crank.

The inventor says: I *claim*, first, the use of the shifting tooth d , springs e and i , and stops f and f^1 , when used in connection with the wheel c , rack b , and slide a , as described, and for the purpose set forth.

Second. The combination and arrangement of the wheel c , rack b , and slide a , as described, and for the purpose set forth.

No. 27,699.—WILLIAM COOPER, of Mount Gilead, Ohio.—*Improvement in Dirt Loading Apparatus for Excavators*.—Patent dated April 3, 1860.—A is a beam, to the forward end of which are secured a plough B and trough C; the plough is provided with two hand sides, one of which is secured to the beam and the other to the side of the trough C.

Claim.—The combination of the square shaft a with the sliding pulley C, band E, pulley x , and plough B, the several parts being arranged together substantially in the manner and for the purpose specified.

No. 27,700.—JOHN H. CRANE, of Charlestown, Mass.—*Improved Spring Bed*.—Patent dated April 3, 1860.—This invention consists in the peculiar form of the springs employed, together with their position and connection relating to the slats and rails of the frame with which the springs are connected, and in the peculiar form and arrangement of the rails.

Claim.—The combination and arrangement, substantially as specified, of the spring b , slats f , and adjustable frame a e .

No. 27,701.—DANIEL DESHON, 2d, of Somerset, Pa.—*Improved Churn*.—Patent dated April 3, 1860.—This invention consists in the mechanical arrangement for changing the fulcrum of the vessel which contains the milk, as the milk passes from one end of the vessel to the other.

Claim.—The combination and arrangement of the racks or breakers i , vessel a , pedestal or chair h , with the rockers b , with projections f , and notches g , in the rocker ways, the whole being combined, arranged, constructed, and operated in the manner described and for the purpose set forth.

No. 27,702.—J. V. DINSMORE, of Auburn, Me.—*Improvement in Metallic Heels for Boots and Shoes*.—Patent dated April 3, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Securing heels to boots and shoes solidly, in all weather and climates and uses, by clamping the sole by the heel A, and drawing it thereon continuously by screw g , and the spring C, acting upon the plate B, or its equivalent, substantially in the manner and for the purposes fully set forth and described.

No. 27,703.—W. D. DORSEY, of Decatur, Ill.—*Improvement in Cultivators*.—Patent dated April 3, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* so combining the hinged beams C D of a cultivator with the treadles H I, as that the driver on his seat may raise either of the two central cultivator hoes F, separately, or all the hoes simultaneously, when constructed and arranged substantially in the manner and for the purposes described.

And I also claim, in combination with the pairs of hoes so hung and operated, the shields

L L, for protecting the young plants from the sods, earth, or soil turned up by the hoes, substantially as set forth.

No. 27,704.—FRANK DOUGLAS, of Norwich, Conn.—*Improvement in Steam Engines*.—Patent dated April 3, 1860.—This invention consists in the employment, in combination with a puppet valve within the same box attached to the cylinder and a spring for opening the valve, of a plate E.

Claim.—The plate E, in combination with the valve G, the spring F, and the bar A, the whole constructed to operate substantially as set forth.

No. 27,705.—NATHANIEL DRAKE, of Newton, N. J.—*Improvement in Corn Shellers*.—Patent dated April 3, 1860.—F is a spring, the lower end of which is secured in the case A in any proper manner. The upper end of this spring bears on the upper part of the plate, or bar E, and a set screw k, which passes through a nut l, attached to the case A, bears on the spring F, and regulates its pressure.

Claim.—The arrangement and combination of the oblique acting adjustable spring E, set screw k, plate E, and adjustable guard chain j, as and for the purposes shown and described.

No. 27,706.—ASAHEL K. EATON, of Kings County, N. Y.—*Improvement in Vulcanizing Caoutchouc*.—Patent dated April 3, 1860.—This invention consists in the use of saline solutions, the boiling points of which may be made to range by means of the greater or less concentration of the same through the different degrees of the temperature required for vulcanization, the solution being used in an open vessel.

Claim.—The new method of applying heat to India rubber or allied gums, when the same are ready for being vulcanized, by the employment of a saline bath, as set forth.

No. 27,707.—A. K. EATON, of New York, N. Y.—*Improvement in the Manufacture of Steel*.—Patent dated April 3, 1860.—The claim explains the nature of this invention.

Claim.—The conversion of cast iron in its solid form into steel, and the simultaneous purification of the same by treatment with the hydrates or carbonates of soda and potash, either alone or combined, substantially as described.

No. 27,708.—DANIEL P. FARNHAM, of Johnstown Centre, Wis.—*Improvement in Well Buckets*.—Patent dated April 3, 1860.—This invention consists in giving to well buckets a peculiar shape, in connection with a novel mode of hanging them.

Claim.—Hanging the buckets by chains D, when the bails are attached to the ends of the buckets below and in front of the succeeding chain, in combination with the holding pins h, and hooked arm c, as described and represented.

No. 27,709.—MOSES FRENCH, of Leesville, Ind.—*Improved Mill Stone Bush*.—Patent dated April 3, 1860.—The object of this invention is to obtain a bush for mill stones that will compensate automatically for the wear of the edges, and at the same time afford facility for the ready lubrication of the spindle.

Claim.—The employment, in combination with the box A and spindle B, of the adjustable plungers F, and oil channels i, substantially as and for the purpose set forth and described.

No. 27,710.—ROBERT GEORGE, of Mineral Point, Wis.—*Improvement in Metallurgic Operations applicable to Certain Ores of Zinc, Lead, Iron, Cobalt, and Nickel*.—Patent dated April 3, 1860.—The ores are continually supplied from the top B. When they are sufficiently roasted to decompose the steam, the valves of the steam pipe D are opened and the steam thus brought in contact with the whole body of the ores.

Claim.—The peculiar combination and arrangement of the several parts of the furnace, as described, with the application of steam for desulphurating sulphuret of zinc (blend black jack) and sulphurous ores, sulphates and sulphurets of iron, nickel, cobalt, copper, and lead, as described, and for the purpose, set forth.

No. 27,711.—HARVEY GUILD, of New Orleans, La.—*Improvement in Syphons Attached to Gas Retorts*.—Patent dated April 3, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The annular syphon composed of an upright cup A, with a flaring or funnel-like mouth and central tube a, and a movable inverted cup D, provided with projections c c, by which it is enabled to be supported by the flaring or funnel-like mouth of the cup A, as described.

No. 27,712.—ALBERT GUMMER, of Indianapolis, Ind.—*Improvement in Automatic Grain Scales*.—Patent dated April 3, 1860.—This invention consists in using two boxes instead of

one, as in other machines, and in a provision for checking the sliding weight when passing from one side to the other without affecting its weighing quality; also a new method by which the number of bushels weighed are registered.

Claim.—The arrangement of the double box beam, with its vertical stem T T, for moving the horizontal slide valve, the two side rods L L and J J, with their sliding weights C C and D D, and the inclined planes M M and N, for checking the said weights, as described.

No. 27,713.—JAMES F. GYLES, of Gilmer Township, Ill.—*Improvement in Seeding Machines.*—Patent dated April 3, 1860.—This invention is an improvement on the seed sower of Aaron Ring, of Portland, Me., patented March 2, 1860.

The inventor says: I *claim*, first, the stud and angular slot or bayonet catch *b*, Fig. 1, when combined with the revolving arms of a rotary seed sower, in the manner set forth.

Second. The combination of the transverse partition *h*, Fig. 3, and the inclined partition *g*, Fig. 3, in manner and for the purpose specified.

No. 27,714.—JOHN C. HALL, of Fayette, Miss.—*Improvement in Buckles.*—Patent dated April 3, 1860.—The object of this invention is to obtain a buckle, or fastening, which may be attached without stitching, or sewing it to the ends of the band, belt, or strap which it is to connect, and to form not only a secure and permanent fastening, but also one that will readily admit of the band being taken up, or shortened as occasion may require.

Claim.—The combination of the ends of the belt, band or hoop *fg*, with a frame A, and bar B, in the manner and for the purpose substantially as shown and described.

No. 27,715.—JOSHUA HATHAWAY, of Marietta, Ga.—*Improved Device for Converting Reciprocating into Rotary Motion.*—Patent dated April 3, 1860.—This invention consists in arranging a reciprocating sliding rod in combination with two flanged wheels, and with independent pulleys and hinged tangential bars on the same shaft, in such a manner that by imparting a reciprocating motion to the sliding bar a continuous rotary motion of the flanged wheels is produced.

Claim.—The arrangement and combination of the reciprocating sliding rod G, rotary flanged wheels A A¹, shaft B, independent pulleys C C¹, and hinged bars D, constructed and operating substantially in the manner and for the purpose specified.

No. 27,716.—THEODORE AUGUSTUS HELWIG, of Minersville, Pa.—*Improvement in the Manufacture of Prussian Blue.*—Patent dated April 3, 1860.—The claim explains the nature of this invention.

The inventor says: I *claim* the application of mine water, containing sulphates of iron and free sulphuric acid, in the manufacture of Prussian blue, or any other native mineral water containing iron, and which will produce the intended effect.

No. 27,717.—JOSEPH C. HENDERSON, of Albany, N. Y.—*Improvement in Cooking Stoves.* Patent dated April 3, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the ash tube *t*, combined with the opening or openings 1 1, into the oven, as specified, whereby I am enabled to convey ashes from the box *s*, to the front hearth *f*, in stoves having a descending front draft entering the oven, in the manner and for the purposes set forth.

Second. I claim the air space formed between the plates *n* and *o*, combined with the air space 3, when the air passes in at the opening 2, for the purposes and as set forth.

Third. I claim admitting air to the fire from the space 3, by the opening 4, between the lower end of the plate *p*, and the grate *r*, as and for the purposes specified.

No. 27,718.—SAMUEL B. HOPKINS and EDWARD H. ANDERSON, of Easton, Md.—*Improvement in Vapor Burners.*—Patent dated April 3, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The original arrangement and combination of parts, as above set forth, viz: the attachment of the burner B, the circular convex plate C, and the circular D, all as set forth, forming a distinct apparatus, capable of being attached to the ordinary slide A, of a single tube fluid lamp, by which a light equal to that given by four ordinary tubes combined is obtained, with one third the amount of oil, all operating and constructed as set forth.

No. 27,719.—JOHN E. KELLY, of New York, N. Y.—*Improvement in Riding Saddles.*—Patent dated April 3, 1860.—A is a ratchet wheel having an upright shaft *a* passing up through the pommel, or front part of the saddle, and terminating in the ring or handle *b*, which is used for turning the brake. The pawl to prevent the brake from giving way extends from the ratchet wheel through the upper lateral part of the saddle, terminating in a head or button.

To the shaft *a* is firmly secured a strong cord, or strap *E*, having on its loose end a snaffle hook.

Claim.—The application of a brake to a saddle, so constructed and arranged as to operate substantially as set forth and for the purposes and uses specified.

No. 27,720.—ADAM HUMBERGER, of Somerset, Ohio.—*Improvement in Corn Harvesters.*—Patent dated April 3, 1860.—This invention consists in an improved arrangement of the platform, or drop for shocking the corn, and in the arrangement of the knives, or cutters, spring guard and clamp for controlling the stalks, with a knife to prevent the choking of the machine.

The inventor says: I *claim*, first, the sectional platform *P*, arranged upon the frame, and pivotted as described, in combination with the rear end gate, for operation in the manner and for the purpose specified.

Second. The arrangement of the spring guards *D* and *H*, and knife *R*, in combination with the cutting apparatus, as constructed and applied, and operating together and in the manner and for the purpose specified.

No. 27,721.—CHARLES B. HOARD, of Watertown, N. Y.—*Improved Means of Winding the Springs of Clocks by Currents of Air.*—Patent dated April 3, 1860.—This invention consists in winding the spring of a clock, or other time piece, by connecting it with an air wheel or motor, so constructed and arranged as to be actuated by currents of air.

Claim.—Winding the spring of a clock, or other time piece, by connecting it with an air wheel or motor, so constructed and arranged as to be actuated by currents of air.

No. 27,722.—CHRISTIAN KRAMER, of Allegheny, Pa.—*Improved Sausage Stuffer.*—Patent dated April 3, 1860.—This invention consists in the use of two wheels working in combination with a screw, said screw and wheels being arranged and combined in a peculiar manner.

Claim.—The arrangement of the gatherer *n*, and feed piece *o*, in the hopper *b*, wheels *m*, and vertical screw *l*, arranged, constructed, and operated as described and for the purpose set forth.

No. 27,723.—JAMES LETORT and H. S. MATHEWS, of Wytheville, Va.—*Improvement in Breech Loading Fire Arms.*—Patent dated April 3, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination and arrangement of the compensating slotted sliding lever guard *g g h J K* with the jointed or hinged rammer *m*, the sliding lifting connecting rod *O P*, the slotted stock *b b b X X*, sliding, shifting, tilting, or jointed barrel *d d d y y y*, and breech loading gun or fire arm, substantially as set forth and described, or in any equivalent manner, whereby the several offices or functions are performed, as set forth, at one and the same time, through the operation or agency of the guard of a gun.

No. 27,724.—PETER LOW, of Cincinnati, Ohio.—*Improvement in Furnaces.*—Patent dated April 3, 1860.—This invention consists in an arrangement of pipes and flues, and the combination of parts in furnaces, stoves, &c.

The inventor says: I *claim*, first, in combination with the air heating chamber *Q* the fire pot *A*, flues *J*, gas chamber *I*, cylinder *K*¹, and smoke pipe *K*, the whole being constructed and arranged in relation to each other substantially as set forth.

Second. I claim the arrangement of the ventilating pipe *T*, gas chamber *I*, and smoke pipe *K*, said ventilating pipe *T*, which leads from the floor of the apartments to be ventilated, being made to pass through the inner space *Q* of the furnace, above the gas chamber *I*, and along side and in close proximity to the smoke pipe, and thence into the chimney, for the purpose of carrying off the vitiated air from the apartments, as specified.

No. 27,725.—GEORGE W. LANE, of Boston, Mass.—*Improved Apparatus for Testing Hollow Floats for Steam Boilers.*—Patent dated April 3, 1860.—The mode described by this inventor is too long for a place in this volume.

Claim.—The said float testing apparatus, to operate in manner and constructed substantially as described, and either with or without either or both the steam and water pipes *G* and *I*, furnished with stop cocks *M N*, as specified.

No. 27,726.—THOMAS LEWIS, of Malden, Mass.—*Improved Sugar Holder and Distributor.*—Patent dated April 3, 1860.—This invention consists in providing a close receptacle, with means for successive discharges of a given quantity of granulated or powdered material contained therein, at a convenient height from the base on which the receptacle for the discharged material rests.

Claim.—The combination of a receptacle *a* with a spring *k* and pocket *e*, when the latter is arranged substantially as and for the purpose specified.

No. 27,727.—C. B. MALLORY, of Fredonia, N. Y.—*Improvement in Straw Cutters.*—Patent dated April 3, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the arrangement of the cylinder *N* and teeth *g*, when they are operated from the same crank in the following manner, to wit: the latter being operated directly from the crank *b*, and the former operated from said crank through the medium of the cross bar *f*, rack *M*, pinion *P*, ratchet *q*, and pawl *r*, substantially as described.

I further claim the suspending of the rack *M* to the shaft *l* of the cylinder *N* by means of the support *j*, and connecting the platform *O* to the cylinder, substantially as described, so as to admit of the rising and falling adjusting movement of the cylinder without interfering with the driving mechanism thereof.

No. 27,728.—SAMUEL W. MARSH, of Washington, D. C.—*Compound Lock and Label Sheath.*—Patent dated April 3, 1860.—This invention consists in constructing a compound lock and safety label sheath, for enclosing or holding a printed, written, stamped, or other kind of label, printed address or card, for the purpose of attaching the same securely to mail bags, trunks, &c.

Claim.—The construction of a compound lock and safety label sheath, or label case and label, as represented in the drawings, Figs. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, and substantially as set forth and described.

No. 27,729.—WILLIAM D. MASON, of Jarrett's Depot, Va.—*Improvement in Machines for Sowing Fertilizers.*—Patent dated April 3, 1860.—*H* is the hopper through which runs a screw conveyor *S* turned by cogged connections *c*¹ *c*¹, so as to discharge from the end of the hopper into the furrow; a continual stream is thus kept up, and fed from the end of the hopper under the offset *O*. *F* is the frame supported by the driving wheels *W*.

Claim.—The arrangement of the screw *S*, hopper *H*, with its offset *O* and inclined plane *D*, gear wheels *c* *c*¹, driving wheels *W*, and frame *F*, as set forth, the discharge taking place under the offset of the hopper, as described.

No. 27,730.—THOMAS J. MAYALL, of Roxbury, Mass.—*Improvement in Machines for making Rubber Belting.*—Patent dated April 3, 1860.—The nature of this invention is explained by the claim and engravings.

The inventor says: I *claim*, first, the new mode described of forming a series of machine belts or bands at one operation, the same consisting in rolling the India rubber or gutta percha into two or more sheets sufficiently wide to form two or more belts at a time, and upon the strips of fabric that compose the inner body of the belts, and then nipping the said sheets together and drawing them around the edges of the belts by the mechanical devices described, so as to completely encase the inner body of the belts, substantially as set forth.

Second. The peculiar shaped formers *h h*, operating as described, to unite the two sheets of India rubber or gutta percha, and also to form the edges of the belts, as described.

Third. The cutters *i i*, so arranged and operated as to run at different speeds and produce a shear cut upon the rubber or gutta percha, substantially as described.

No. 27,731.—EDWARD MAYNARD, of Brooklyn, N. Y.—*Improvement in Carriage Springs.*—Patent dated April 3, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the double curved or wing shaped spring *c*, formed with separated leaves, as set forth, and connected at the centre part to the axle by means of the curved chair clip, or its equivalent, and by eyes at the ends to the bolts *l l* or body loops, substantially as and for the purpose specified.

I also claim the chair clip *d* to which the spring is firmly bolted, and which is attached to the axle by the two clip pieces *3 3*, whereby the axle is not injured by bolt holes for the springs and the weight is distributed on said axle, as specified.

No. 27,732.—OSCAR F. MORRILL, of Boston, Mass.—*Improvement in Vapor Burners.*—Patent dated April 3, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The improved arrangement of the tubular rotary cut-off and its elevating spring, with reference to the jet tube and the screw cap, such cut-off being provided or not, as circumstances may require, with a device for moving it both laterally and longitudinally, and such device being arranged at its lower part, substantially as described.

No. 27,733.—JOHN D. MURPHY, of Baltimore, Md.—*Improvement in Wheels for Flying Artillery Carriages.*—Patent dated April 3, 1860.—*A* is the tire or rim of the wheel made of wrought iron; *B B* are the spokes, also of wrought iron; *C* is the cast iron hub, which is cast

on the inner ends of the spokes, after they have been loosely fitted to the rim A; D is a loose iron flange having any suitable number of bolt holes *a a* and a round hole in which turns or works the part E of the hub C.

The inventor says: I *claim*, first, the combination of the solid hub C with the spokes B, substantially as set forth.

Second. I claim the combination and arrangement of the flange D, or its equivalent, with the hub C, substantially as set forth.

No. 27,734.—THOMAS M. MULLEN, of Philadelphia, Pa.—*Improvement in the Framing of Railroad Cars*.—Patent dated April 3, 1860.—This improvement consists in making the central longitudinal beam C of the frame of two separate strips *a a*¹, extending the whole length of the frame, with intervening packing pieces between the said strips, and in applying to the beam thus constructed the braces M M¹, at the points where it rests on the trucks, so that no piercing of the beam for the reception of the king bolts is required.

Claim.—The longitudinal beam C, composed of two strips *a* and *a*¹, with intervening packing pieces *b*, in combination with the diagonal braces M and M¹, the whole being constructed and arranged in respect to the king bolt substantially as and for the purpose set forth.

No. 27,735.—EDMUND MUNSON, of Utica, N. Y.—*Improvement in Grinding Mills*.—Patent dated April 3, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement of the driver M, relatively, as shown, with the apex of the spindle F, to cause the apex of the spindle and the bearing surfaces of the arms *v v* of the driver to be in one and the same plane, and thereby admit of a universal adjusting movement of the runner C, to preserve the parallelism of the two stones, as set forth.

Second. The collar I, attached to the spindle F, perforated with holes *l*, in combination with the tube *k*, attached to and placed centrally within the box J, the perforations or holes *l* being above the bearings *h*, and below the top of the tube *k*, to operate as and for the purpose specified.

No. 27,736.—JULIUS POLLOCK, of Morrisiana, N. Y.—*Improvement in Ventilators for Hats*.—Patent dated April 3, 1860.—This invention consists in the combination, with a hollow inflated cushion A, of a series of small tubes or corrugations B, so located that when the hat is put on the head the said tubes will lie in the hollows formed by the depressions of the head at the temples.

Claim.—In combination with a hollow inflated cushion, the employment of tubes or corrugations for the passage of air, and so placed in the hat as to fit in the cavities of the head over the temples, as described, and for the purpose set forth.

No. 27,737.—RUEL RAWSON, of Quincy, Michigan.—*Improvement in Car Couplings*.—Patent dated April 3, 1860.—This is a self-connecting and disconnecting car coupling, with an attachment, whereby the coupling may be prevented from connecting, when it is desired to push any number of cars upon a switch by the action of the bumpers.

Claim.—The arrow headed bars B, springs *d*, standard S, and casing A, in combination with the guard bar G, arranged and operating substantially as set forth.

No. 27,738.—HARVEY RICE, of Concord, N. H.—*Improvement in Railroad Axle Boxes*.—Patent dated April 3, 1860.—This invention consists in combining with the box and axle a packing of leather, applied to the smallest part of the cone so as to be interposed between the conical surface and the groove which receives the usual packing, whereby the oil is prevented from reaching that part of the surface of the axle which lies between the cone and the usual packing.

Claim.—The combination of the inner packing applied to the axle at the smallest part of the conical surface, substantially as described, in combination with the axle having the said conical surface and the box with its outer packing, substantially as and for the purpose specified.

No. 27,739.—CORNELIUS J. ROONEY and DAVID RENSHAW, of New York, N. Y.—*Improved Pen Stand*.—Patent dated April 3, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The pen stand or pen rest, as described, made by arranging the series of converging or conical and open bottomed cups 5 5, over the series of cups 6 6, one or both of these series of cups being so attached as to be readily removable to facilitate the cleaning of the lower cups, substantially as and for the purpose set forth.

No. 27,740.—ALONZO R. ROOT, of Canton, Mo.—*Improvement in Seeding Machines*.—Patent dated April 3, 1860.—This invention consists in combining the seed dropping valve

with a pivot flap valve and a double spiral spring, in order that the valve may be allowed to work whichever way the axle may turn and still be closed with a strong spring force; also in the arrangement of the revolving weed cutter or clearer in combination with the furrow openers and the moving frame of the planter.

The inventor says: I *claim*, first, the construction and arrangement of the inner cylindrical distributing device E, with the outer cylindrical case D G¹, flap valve L, axle A, and cut-off I, substantially as and for the purposes set forth.

Second. Combining the double spiral spring N, valve L, pivot k, and flap M, in the manner described and for the purpose set forth.

Third. Arranging the revolving weed cutter T in front of each plough, the shaft of which has its bearing in the front part of the plough, in such a manner that the cutter rod may also serve to lift the ploughs over obstructions, all as described and for the purposes set forth.

No. 27,741.—JAMES K. ROSS, of Lebanon, Ohio.—*Improvement in Fire Places*.—Patent dated April 3, 1860.—This improvement relates to an arrangement in connection with a customary open fire place of a system of passages, for the purpose of supplying apartments with properly warm and moistened fresh air.

Claim.—The arrangement, in the rear of an open fire place C, of a heated chamber F, vaporizing apparatus I J K, and registered communications G N L M M¹, with both the external and the internal air, as and for the purposes set forth.

No. 27,742.—SOLOMON N. SANFORD, of Cleveland, Ohio.—*Improvement in Apparatus for Starting City Railroad Cars*.—Patent dated April 3, 1860.—When the spring is wound up the car may yet run in either direction independently of said spring so long as the catches are kept clear of the ratchet wheels. The dogs T and U are released by pulling up the rods m n, which are held by the catch spring S. The spring V when under high tension slips over the catch R, without breaking.

The inventor says: I *claim*, first, the use of the spring V, when attached to notch R, in order to release itself under high tension, thus checking the running gear without breaking the spring, substantially as set forth.

Second. I claim the arrangement of the drum D, provided with the two independently revolving heads C and C¹, in combination with the spring V and axle X, all operating together with the dogs T and U, substantially as set forth, for the purposes specified.

Third. I claim the peculiar arrangement of the friction clutches E and F, arms G, ratchet bar H, pinion I, and shaft K, in combination with the drum D, spring V, and axle X, substantially as described, for the purpose set forth.

No. 27,743.—THOMAS SNOWDON, of Pittsburgh, Pa.—*Improved Feed Water Arrangement for Steam Boilers*.—Patent dated April 3, 1860.—By this invention the feed water in passing into the water space is exposed directly to the heat of the steam or water in the boiler before it discharges into the water space.

Claim.—Locating a feed water pipe within the steam space of the boiler, and having one end of said pipe communicate with the feed pump or doctor, and the other end dip down into the water space, as and for the purposes set forth.

No. 27,744.—JEREMIAH STEVER, of Bristol, Conn.—*Improvement in Portable Stamping Machines for Crushing Stones, &c.*—Patent dated April 3, 1860.—Power is transmitted to the ore crushing device by means of an endless band G², the connecting pulley H upon the shaft Z, and the pulley G upon the cam shaft D. As this shaft D revolves the cams a, which are arranged upon the shaft D, act upon the collars B fastened to the stampers C, and alternately lift and let fall the stampers for the purpose of crushing the ore contained in the box f, the perforations in the bottom f², and the open spaces between the bars f¹ forming the front of the box F, allow the pulverized substance to escape.

Claim.—The combination and arrangement of the carriages S P Q R, boiler T, oscillating engine U V W, pulleys H J G, gearing K L M N O, and stamping device E A B C F, in the manner and for the purposes set forth.

No. 27,745.—DAVID H. SMITH and E. E. SMITH, of Glenn Spring, S. C.—*Improvement in Ploughs*.—Patent dated April 3, 1860.—The mould board has two horizontal ridges i i on its rear side, which rest against the front surface of the foot B of the plough standard E. A horizontal brace J is fastened to the upper end of the standard E, through the agency of a shoulder Z, screw thread H, and nut H¹; both ends I I of the brace are screw threaded and inclined so as to pass at right angles through the handles L L, to which they are firmly secured by nuts I¹ I¹.

Claim.—The arrangement of the mould board A a, reversible cutter C, wedges i i, inclined and slotted foot B, standard E, with shoulder Z, and screw H, and the brace J, with inclined screw threaded ends I I, the whole substantially as and for the purposes set forth.

No. 27,746.—HENRY G. SMITH, of Muscatine, Iowa.—*Improved Metal Head for Brooms.*—Patent dated April 3, 1860.—This invention consists in the employment or use of cast-iron plates connected together by keys and lips and forming sockets, one to receive a handle and another to receive the broom or brush.

Claim.—Forming the broom and brush head of two parts A A, constructed as shown, and connected by the lips *b c* and keys *d*, substantially as and for the purpose set forth.

No. 27,747.—JOSEPH SMITH, of New York, N. Y.—*Improved Curtain Fixture.*—Patent dated April 3, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the hooked pawl, with its grooved pulley H, spring J, and ratchet wheel P, arranged and operated with one cord so as to raise, lower, or stop the curtain at any desired point, as described and represented.

No. 27,748.—SAMUEL P. SWEENEY, of Columbia, Texas.—*Improvement in Cotton Seed Planters.*—Patent dated April 3, 1860.—The apparatus rests on a beam and is governed by the handles I. This construction admits of the hopper and other planting parts being removed, when the remainder can serve as a plough.

The inventor says: I *claim*, first, the adjustable, oscillating, planting apparatus A, constructed and operating as described.

Second. The combination of the stirrer *h* and agitator A, as described.

Third. The arrangement of coverer D, driving wheel W, hopper H, cutters C C, stock P, and opener O, as and for the purposes set forth.

No. 27,749.—ALBERT W. TANNER and ORLANDO P. GORTON, of Paw Paw, Mich.—*Improved Window Curtain Fixture.*—Patent dated April 3, 1860.—This invention consists in an arrangement so that the curtain can be either raised from the bottom or lowered from the top of the window, or, if desired, placed at any inclination.

The inventors say: We *claim*, first, the employment of the wheel *d*, when the same shall be constructed and used, substantially as and for the purpose specified.

Second. We claim the spools *a a*, pulleys *b b*, and cords *m* and *n*, in combination with a wheel *d*, the whole being constructed and arranged substantially as and for the purpose set forth.

No. 27,750.—THOMAS RANDOLPH TAYLOR, of Cleveland, Ohio.—*Improved Horse Shoe Machine.*—Patent dated April 3, 1860.—This invention consist in a novel system of dies, and the means of operating the same to forge a shoe with front and back calks by a continuous operation.

The inventor says: I *claim*, first, the combination of a reciprocating male die N, a reciprocating female die O, and a pair of recessed, reciprocating, and swinging jaws R R, the whole arranged and operating in relation to each other, substantially as described.

Second. The combination of the projections 10 10 on the male die, and the recesses 11 11 on the female die, operating together, substantially as described, to produce the heel calks on the shoe.

Third. The combination of the recesses *r r* in the swinging jaws R R, and the recess *f*, in the female die O, said recesses operating in conjunction with the other parts of the jaws and female die, as described, to produce the toe calk.

Fourth. Effecting the closing of the swinging jaws R R by their descent into an opening *v v* in the bed plate of the machine, substantially as described.

Fifth. The attachment of the movable cutter U to a slide U¹, arranged and operated by the mandrel of the male die N, substantially as specified.

No. 27,751.—A. L. O. WALL, GEORGE ROBERTS, and MILO S. CARTER, of Decatur, Ill.—*Improvement in Mole Ploughs.*—Patent dated April 3, 1860.—As the coulter advances through the soil it draws the mole after it, and leaves a slit behind it extending from the bottom of the drain to the surface. The mole crowds the loose earth away from its path, and compacts it against the sides of the perforation, which it makes during its progress.

Claim.—The ovoid-shaped mole, in combination with the scooping flanges, substantially as described, for the purposes set forth.

No. 27,752.—PETER L. WEIMER, of Lebanon, Pa.—*Improvement in Governor Valves for Steam Engines.*—Patent dated April 3, 1860.—This invention consists in a self-adjustable cut-off for a steam engine, the point of the cut off being determined by the governor, and varied as there is labor put on or thrown off the engine, thereby giving the engine a regular motion.

Claim.—The combination and arrangement of a self-adjustable cut-off valve by means of the shaft S and arm T latching into the latches H, and adjusted by the governor attached to the arm W operating the shaft, by means of an eccentric X working in the frame R, in such

manner that when the engine slightly changes its speed, the shaft, with its arms T, will be moved from or towards the latches H, substantially as described.

No. 27,753.—J. W. WETMORE, of Erie, Pa.—*Improved Legislative Voting Register*.—Patent dated April 3, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, arranging the names of the voters in a series of blocks or types, each of which moves independently of the others, and is under the exclusive control of the voting member himself, for the purpose set forth.

Second. The combination of the printing mechanism with the balloting mechanism, when the two are arranged in such manner as to be operated simultaneously by the same mechanism, for the purpose set forth.

Third. Constructing the ballot boxes of such capacity as to contain but one ballot ball at a time, when the same are provided with doors, escape of slides or valves at top and bottom to prevent the entrance or escape of more than one ball at each vote.

Fourth. Constructing the ballot boxes with an entrance door, slide, or valve, under the control of the speaker or other proper officer, and an exit door, slide, or valve, operated by and under the exclusive control of each voter, for the purpose described.

Fifth. An automatic counting or registering apparatus, operated by clock work, or its equivalent, to indicate optically the number of votes cast.

Sixth. The combination of the balloting mechanism with the counting or registering mechanism, when arranged in such manner that the latter is operated by the passage of the ballot balls from their boxes into some suitable receptacle, for the purpose described.

Seventh. The combination of a printing mechanism, a balloting mechanism, and a counting or registering mechanism, when the same are arranged for joint operation, in such manner that each one serves as a check whereby to ascertain the accuracy of the operation of the others.

No. 27,754.—WILSON W. WILLIAMS, of Elizabeth City, N. C.—*Improvement in Sowing Machines*.—Patent dated April 3, 1860.—This machine consists of two hoppers H leading down into the box A, having a partition P longitudinally to keep separate the grain and the manure, and perforated at the bottom with holes of any size or number required. C is a frame fastened to the shafts, in which frame the hoppers rest. The box A is suspended from the frame C by the leather straps R.

Claim.—The arrangement of hoppers H, box A, partition P, frame C, straps R, and wheel W, placed on an ordinary or common cart, operating as described, and for the purposes set forth.

No. 27,755.—LEANDER W. BOYNTON, of New York, N. Y., assignor to himself and DURHAM & BOOTH, of New Haven, Conn.—*Improvement in Attaching Thills to Vehicles*.—Patent dated April 3, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The use of the hook and eye, in combination with the flanged plate and rubber, when the pressure of the rubber against the eye is regulated by means of the flanged plate, with its screw bolt, and the whole is constructed and made to operate substantially as described.

No. 27,756.—CHARLES DIEDRICH and WILLIAM T. SLOCUM, of Philadelphia, Pa., assignors to JAMES T. MASON & Co., of said Philadelphia.—*Improved Machine for Making Metal Caps for Boxes*.—Patent dated April 3, 1860.—This invention consists of a shoot or conductor S, with a bent tongue, inclined side, and verticle chamber with an opening, arranged in respect to the die of the cutting punch, and the die for turning the edge of the disk, so that the disks after leaving the cutting die may assume a proper position for the action of the forming die; also in a device for forcing the lids or bottom from the openings in which they have been formed.

The inventors say: We *claim*, first, the shoot or conductor S, with its bent tongue Z, its inclined side, verticle chamber, and opening *x*, the whole being constructed substantially as set forth, and arranged in respect to the die *f* of the punch *e*, and the die *q* of the rod Q, as specified.

Second. I claim the rod Q and its die *q*, with the central opening for the rod *t*, the whole being arranged in respect to the vertical chamber, the shoot S, and its opening *x*, and operating as and for the purpose set forth.

No. 27,757.—GEORGE FELTER, of Philadelphia, Pa., assignor to himself, EDWARD JONES, and JACKSON P. COWLEY, of said Philadelphia.—*Improvement in Cutting Apparatus for Harvesters*.—Patent dated April 3, 1860.—This invention consists in so arranging the knives or separate inclined planes formed on the cutter bar, that they will underlap and overlap each other; also, in the reciprocating driving rods with projections, or their equivalents, so combined with, and arranged in respect to, the forked ends of the shanks of the vibrating knives,

that the said knives shall be moved alternately from a point above and a point below their cutting plane, thus causing the cutting edges to be invariably in close contact with each other.

The inventor says: I *claim*, first, arranging the vibrating knives upon separate inclined planes, so formed on the cutter bar, that the said knives may underlap and overlap each other in the manner specified.

Second. I claim the driving bars C and D with their respective projections, or equivalents thereto, in combination with the inclined knives and their forked shanks, the whole being arranged and operated substantially in the manner and for the purposes set forth.

No. 27,758.—FRANK G. JOHNSON, of Bellwood, Sag Harbor, N. Y., assignor to himself and DANIEL F. TOMPKINS, of Newark, N. J.—*Improved Wind Machine for Pumping Water*.—Patent dated April 3, 1860.—The pressure of the wind will force back the frame A, carrying with it the rod K, and by means of the connecting rod c, elevating the weight g, or its equivalent—the handle on the piston rod of the pump—until K reaches the position shown at A², when the angular projection on the disk h is caught by the wind, and the upper part of A will then overbalance the lower part, and A will turn on its bearing at L.

Claim.—The wind surface A h, in combination with the vane b, connecting arm k f, rod c, and weight g, the whole constructed and operated in the manner and for the purposes set forth.

No. 27,759.—ALEXANDER McELROY and ROBERT B. McELROY, of Waupun, Wisconsin, assignors to Robert B. McELROY, aforesaid.—*Improvement in Seeding Machines*.—Patent dated April 3, 1860.—The series of cams formed by the zig-zag shape given to the flanch A, as they revolve with the wheel J, impart motion to the lever B, which is reciprocated by the reacting spring C, moving the lever through the rod P, and thus vibrating the slide E and agitator V, connected to the longer arm of the lever B, said lever having its fulcrum on the frame work of the machine at the point a¹.

Claim.—The arrangement of the deflecting boards G¹ and H, the rod N, and the seed hopper, provided at its bottom with the vibrating agitator V and seed slide E, in which are cavities o and openings e, the whole being used substantially as and for the purpose specified for scattering the seed broadcast.

No. 27,760.—JOHN McMURTRY, of Fayette County, Ky., assignor to G. B. KINKHEAD, of Lexington, Ky.—*Improvement in Operating Hoisting Wheels*.—Patent dated April 3, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Removing the pinion g entirely out of gear with the spur wheel f on the roller shaft, so as to permit the spur wheel f to turn freely, and, at the same time, at will, either to let the pinion g rest between the gearing of the fast or slow motion, or cause it to pass immediately in gear with the fast, or return it to the slow motion, substantially as described and for the purposes set forth.

No. 27,761.—THOMAS NEWLOVE, of Chicago, Ill., assignor to himself, JAMES BOWLEY, and T. LYNCH, JR., of said Chicago.—*Improvement in Sewing Machines*.—Patent dated April 3, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the sheathed guide lever l, with the straight looper n¹, substantially in the manner described, and for the purpose of securing a positive forward and back, as well as a positive lateral, movement to the looper.

No. 27,762.—JOHN STEVENS, of New York, N. Y., assignor to H. BRIND, of said New York.—*Improvement in Mechanism for Threading Sewing Machine Needles*.—Patent dated April 3, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination and arrangement of the perforated piece 3, provided with a set screw or other convenient means of attaching it to the needle with the arm 6, jointed to the piece 3, as described and shown, in such a manner as to furnish a ready and convenient means of securing the accurate adjustment longitudinally with the needle, to cause the hook 7 to enter the eye of the needle as set forth.

Second. The combination with the arm 6, containing the hook 7 of the flanges 8 8, to secure the proper lateral adjustment of the hook, substantially as set forth.

Third. The combination, with the folding arm 6, and with the needle beam, of the spring 9, substantially as and for the purpose set forth.

No. 27,763.—WILLIAM THOMAS, of New York, N. Y., assignor to himself and WILLIAM WEBB, of said New York.—*Improvement in Machines for Moulding Candles*.—Patent dated April 3, 1860.—This invention consists in the application of a pouring dish to the top of the mould frame, so operating in connection with the wick holders that the tallow is prevented from coming into contact with the mould bed; also in the use of a supporting frame for

sustaining the candles by their wick holders while taken off the moulding frame after having been discharged from the moulds.

The inventor says: I *claim*, first, the pouring pan, fitted with holes so formed as to enclose, in combination with the wick holders, the top of each mould, as described.

Second. I claim the arrangement of the wick holders upon slides, so as to be capable of shifting the wicks to one side of the moulds for facilitating the free entrance of the tallow, as described.

Third. I claim the supporting frame, operating in combination with the discharging apparatus and with the wick holders, for raising and supporting the candles after they are discharged, as described.

No. 27,764.—GEORGE W. N. YOST, of Yellow Springs, Ohio, assignor to G. W. N. YOST & Co., of said Yellow Springs.—*Improvement in Corn Planters*.—Patent dated April 3, 1860.—The operation is as follows: The extremities of the arms C in the two series are set, and then the machine is drawn forward across the field, thus planting the hills at uniform distances.

Claim.—The arrangement of the cams G, slides F, and crank pin H, in connection with the radial arms C, in the manner and for the purposes substantially as described.

No. 27,765.—JAMES ALDRICH, of Washington, D. C.—*Improvement in Water Elevators*.—Patent dated April 10, 1860.—The girder *i* extends horizontally under the windlass, to which is secured the guide *h*, forming the socket *s*, and has a projection against which the bolt *f* locks. As the bucket *n* is drawn up, the bail *m* comes in contact with the rods *l l*, extending across parallel with the girder *i*, which turns it in position, and being guided by pieces *r r* is sure to place one edge of the bucket under the hook *p*, and then being raised sufficiently, will empty its contents into the spout in the recess *d*.

Claim.—The mechanical arrangement of the pulleys $e^1 e^2$, the sliding bolt *f*, and spring *t*, the rope *g*, the guide *h*, and sockets *s*, the rods *l l*, and guides *r r*, or their equivalents, for the purposes set forth.

No. 27,766.—C. ATKINSON, of Vermont, Ill.—*Improvement in Seeding Ploughs*.—Patent dated April 10, 1860.—The object of this invention is to obtain an implement for planting seed, and, at the same time, for preparing the ground in a more proper state than usual to receive the seed and favor its rapid germination and growth. It consists in an arrangement of rotary cutters, double mould board share, subsoil share, and seed distributing device.

The inventor says: I *claim*, first, the arrangement of the double mould board share F, coulter G, subsoil share e^* , and a suitable seed distributing device, for joint operation as set forth.

Second. The supporting of the implement by the wheels B B I l l, when arranged with the beam D, axle A, and bar E, substantially as shown, to graduate the depth of the cut of the shares as specified.

No. 27,767.—LUTHER ATWOOD, of New York, N. Y.—*Improvement in the Distillation of Hydro-Carbon Oils*.—Patent dated April 10, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The use of steam in preparing a hot still for the safe admission of a charge of oil, substantially as described.

No. 27,768.—LUTHER ATWOOD, of New York, N. Y.—*Improvement in Apparatus for the Distillation of Coal Oils*.—Patent dated April 10, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, a volatile oil still, capable of being heated at the sides, and constructed with a removable lower section consisting of the bottom and a short section of the side, substantially as described, and substantially for the purposes set forth.

Second. The combination of a weighted safety valve with a volatile oil still, constructed substantially as described, and so arranged as to relieve the still from pressure when the condenser becomes choked.

Third. The steam pipe and valve O, safety valve N, and closed angle valve L^1 , when used in combination with a still and steam boiler, the whole substantially as described.

Fourth. The steam pipe and valve P, and angle valve L^1 , when used in combination with the condenser and steam boiler, substantially as described, and substantially for the purposes set forth.

Fifth. The use, in combination, of two or more man holes in the top or cover of the still, substantially as described, and substantially for the purposes set forth.

Sixth. The use of the main N^4 , in combination with the safety valve, substantially as described, and substantially for the purposes set forth.

Seventh. The described mode, substantially, of setting a still so that the lower section can be removed without disturbing the main body of the still.

No. 27,769.—JOHN AVERY, JR., of New York, N. Y.—*Improved Steam Trap Valve*.—Patent dated April 10, 1860.—When the pipes and cylinder are cold, the contraction of the pipe F causes its free end to leave the valve c, and thus an opening is formed and the water runs out of it into the chamber L, and thence out of the waste pipe K. When steam is let into the pipe F or it becomes heated, it expands until it closes its free end against the valve c and thus remains tight so long as the heat remains in it; and its elongation beyond a certain point is taken up by the compression of the spring or cushion under said valve and prevents any breakage.

Claim.—The combination of an expansible tube, an elastic or self-yielding adjustable valve and a condensing chamber, substantially in the manner and for the purpose set forth.

No. 27,770.—JOHN M. BATCHELDER, of Cambridge, Mass.—*Improvement in Compounds for Insulating Telegraph Wires*.—Patent dated April 10, 1860.—The claim explains the nature of this invention.

Claim.—A telegraph wire, or other conductor of electricity, insulated with a compound substance, composed of pulverized silex, glass, or other non-conducting material, mixed with India rubber and sulphur and subsequently vulcanized, substantially as described.

No. 27,771.—LORENZO BEACH, of Montrose, Pa.—*Improvement in Horse Rakes*.—Patent dated April 10, 1860.

The inventor says: The coupling together of the teeth arms by wooden pins obviates the necessity of using iron rods, which are liable to rust, and make it difficult to take the teeth arms out for repair. By removing the cap b from the block a, either pair of the teeth arms can be taken out for repair.

Claim.—The arrangement of the teeth arms c, the pivot pins w, blocks a, semi-circular rests t, lever s d, handles h, and balance k, as described and for the purposes specified.

No. 27,772.—GEORGE W. BIGELOW, of New Haven, Conn.—*Improved Burglar's Alarm*.—Patent dated April 10, 1860.—This invention consists in arranging two pivoted jaws in combination with a spring in such relation to each other that the tapering end of one of the jaws can be depressed into a slot in the end of the other jaw, and that both together, when thus compressed, can be inserted into the crack of a door or window up to a shoulder which projects from one of said jaws, so that when the door is opened one of the jaws strikes against a nipple attached to the other one and explodes the cap.

Claim.—The arrangement of the pivoted jaws A B with the tapering ends f g, and with the hammer c and nipple d, in combination with the spring C, constructed and operating substantially as and for the purpose described.

No. 27,773.—SEWALL BRACKETT, of Fall River, Mass.—*Improved Knife and Fork Cleaner*.—Patent dated April 10, 1860.—This invention consists in a combination of fibrous, revolving, scouring rollers B, driven by the cog gear D, and set in motion by the crank H.

Claim.—The combination and arrangement of the scouring rollers B and C, the gears D, the saddle F, the rods I, the springs d, cases A and E, all substantially as and for the purposes specified.

No. 27,774.—F. CHAMBERLIN, of Berlin, Wis.—*Improvement in Seeding Machines*.—Patent dated April 10, 1860.—This invention consists in constructing and arranging the several parts of the machine.

The inventor says: I claim, first, the arrangement of the dragging seed troughs P P P, hinged and held in position by means of springs S S S, when the same are used in connection with the seed spouts a a a and seeding cylinder C, substantially as and for the purpose specified.

Second. The combination of the seeding cylinder C, provided with cups, as set forth, with the hopper A¹ and A and box D, provided with seed spouts and with a hinged cover F, for drilling or seeding broadcast, substantially as specified.

No. 27,775.—SAMUEL CHAMBERLAINE, of Philadelphia, Pa.—*Improvement in Apparatus for Generating Gases*.—Patent dated April 10, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim, first, combining the two vessels A and B, which contain the gas making ingredients, by means of a syphon C, substantially as described, so that when a reduction of pressure is produced in the generating vessel by permitting the escape of gas or air therefrom, the acid or other liquid from the other vessel will be caused to flow over into the generating vessel by the difference of pressure.

Second. The arrangement, in combination with the two vessels A and B and their connecting syphon C, of the two three-way cocks, or their equivalents, E and G, in the outlets of such vessels, the connecting pipe h between the said cocks, or equivalents, and the piston H,

geared with said cocks, or equivalents, whereby, when the pressure in the generating vessel reaches a certain degree, the gas is caused to flow back to the other vessel, and so prevent more acid or other liquid coming over from the latter vessel, and when a further increase of pressure takes place, providing for the escape of gas to the atmosphere, substantially as described.

Third. The pumping apparatus, consisting of the cylinder M, with its partition i, two connected pistons K K¹, passages and double four-way cock L, applied substantially as described, in combination with the generating apparatus and the receiver or cooler O, to deliver gas and water simultaneously into the receiver and cooler at a uniform pressure.

No. 27,776.—JOHN G. CHRISTOPHER, of Byron, Ill.—*Improvement in Cultivators*.—Patent dated April 10, 1860.—The object of this invention is to obtain a cultivator that may be rendered capable of performing various kinds of work, as may be required, by a very simple adjustment of parts.

Claim.—In combination with the ploughs C C D, the adjustable bar p, provided with the roller t, and arranged to permit of the adjustment, as shown, for the purpose set forth.

No. 27,777.—JOHN COCKBURN, of New York, N. Y.—*Improved Pen and Pencil Case*.—Patent dated April 10, 1860.—This invention consists in combining with an ordinary spirally slotted tube, for operating the pencil tube, an extension tube and pen slide, all arranged relatively to each other and fitted within a shell or external case to effect the desired end.

Claim.—The combination of the spirally slotted tube D, extension tube B, the longitudinally slotted tubes b c, and the tube E, with the pencil slide F and pen slide G; the pencil slide F, pen slide G, and the tube D being provided respectively with pins m i l, which fit in the slots g c d of the tubes D C, and all arranged relatively with each other and the case A, as and for the purpose specified.

No. 27,778.—CALVIN COX, of Coxville, N. Y.—*Improvement in Breech Loading Fire Arms*.—Patent dated April 10, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Dividing the barrel transversely at such a point that part of the bore, which receives the charge, shall be a fixture with the breech, in combination with the manner of hinging the barrel, and producing a close lock joint between the same and breech, substantially as and for the purposes set forth.

No. 27,779.—PEARSON CROSBY, of New York, N. Y.—*Improvement in Saws*.—Patent dated April 10, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Making saws with the teeth of the form substantially as described, that is to say, with the two angles on the upper edge and with the sides of the teeth, after being set, brought to a plane on each side, parallel with the face of the saw, substantially as described; but this I only claim in combination with the slitting teeth made of greater length than the cutting away teeth, and bevelled laterally and alternately on opposite sides, substantially as and for the purpose specified.

No. 27,780.—A. CUTLER and E. S. WRIGHT, of New York, N. Y.—*Improved Carpet Beater and Cleaner*.—Patent dated April 10, 1860.—The whips a¹ consist of curved elastic arms with rounded ends, or with a piece of wood b¹ secured to their ends. These arms are all secured to the shaft E, and are bent in the form of parabolic curves. The rotary beaters create a current of air in the box D, which assists in dispelling the dust and discharging it from the box.

The inventors say: We claim, first, the employment of the parabolic spring beaters a¹, when the same are elastic throughout their entire lengths, and are arranged upon a driving shaft E, substantially as shown and described, for the purpose set forth.

Second. The arrangement and combination of the blast spouts M N and beaters a¹, as shown and described.

Third. The arrangement and combination of the rollers B, endless bands a, boxes D D¹, beaters a¹, spouts M N, suction pipe J, fan boxes G G¹, fans H H¹, and discharge spout K, as and for the purpose shown and described.

No. 27,781.—ELLIOT DICKERMAN, of Richmond, Vt.—*Improved Clothes Wringer*.—Patent dated April 10, 1860.—This is an invention for using India rubber rollers for pressing water from clothes after washing, so that the rollers will have the elasticity due to the entire roller during the pressing operation.

Claim.—The arrangement of rubber rollers R R¹, rigid rollers B B¹, and their respective shafts, with the slotted frame F, as described, whereby the entire elasticity of the rubber rollers is rendered available for the desired purpose.

No. 27,782.—LOVETT EAMES, of Kalamazoo, Mich.—*Improved Mortising Tool*.—Patent dated April 10, 1860.—The claim and engravings explain the nature of this invention.

Claim.—In combination with the parallel lip *d*, on the side of the auger cap, the hollow conical mouthed and scalloped chisel point, whereby a hole the full width of the chisel may be bored by the auger, and the cuttings made by the auger will be directed towards the centre of the auger, as described.

No. 27,783.—SETH W. EELLS, of Mansfield, Ohio.—*Improvement in Apparatus for Evaporating Sugar Juices*.—Patent dated April 10, 1860.—This invention consists in having an evaporating pan for boiling and graining thick syrup; in having a boiler constructed with one or more tubes passing through it, to expose more surface of heat to the syrup, and the same boiler also to have one or more partitions to separate somewhat and the better to manage the different stages of boiling syrup from the fresher cane juice; and also so constructing the apparatus that the steam from the boiling tank may be conducted in tubes through pipes of fresh juice, to raise the scum for purposes of defecation.

The inventor says: I *claim* the evaporating pan for boiling thick syrup and graining sugar, such pan being placed in another pan or vat containing fluid, substantially as described, that the danger of burning or overheating the graining sugar may be obviated.

I also claim the application of the principle of using tubes in the boiler, substantially as described, to increase the heating surface for evaporating cane juice, thereby expediting the process and economizing space.

I also claim the application of this principle to the purpose of evaporating cane juice or sugar, substantially as described.

No. 27,784.—JAMES E. EMERSON, of San Francisco, Cal.—*Improvement in Fastenings for Axe Handles*.—Patent dated April 10, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The employment of the lips *a a*, in combination with the axe *A*, head *e*, key *c*, and wedge *d*, when the said lips constitute a part of the axe and are made flush therewith, all as shown and described.

No. 27,785.—JAMES E. EMERSON, of San Francisco, Cal.—*Improvement in Lubricating Carriage Axles*.—Patent dated April 10, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Supplying the oil to the axle through the bottom of a tube *A*, or that end nearest the axle, by means of a screw cap, valve stem and valve, arranged and operating essentially as set forth and for the purposes described.

No. 27,786.—ORMROD C. EVANS, of New York, N. Y.—*Improvement in Steam Engines*.—Patent dated April 10, 1860.—This invention consists in converting reciprocating into rotary motion, and applying the same to stationary steam engines by a cam operated by a jointed piston rod, which rod presses the cam upon the outer face of the driving wheel *G* in its backward motion, while the cam *B* is detached from the face of the wheel *G* during the forward movement of the piston and cam.

Claim.—The cam *B*, the rule joints *A A¹ A² A³*, bridles *F F*, arms *e e*, springs *s s*, and compound lever *c*, in combination, constructed and arranged substantially as described, and for the purpose set forth and shown in the drawings.

No. 27,787.—JOHN N. FARNAM, of Hartford, Conn.—*Improved Knife Sharpener and Cleaner*.—Patent dated April 10, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement of the polishing plates *B C*, to be used in the manner and for the purpose described, substantially as set forth.

Second. The arrangement of attaching the knife sharpening plates *G G¹* to the plate *C*, to be used for the purpose described, substantially as set forth.

Third. I claim the gate *E*, constructed and combined with the hoppers *D D¹*, as and for the purpose specified.

Fourth. I claim the combination of the polishing plates *B C*, the hoppers *D D¹*, with the sharpening plates *G G¹*, and spiral springs *b b¹*, constructed and arranged as and for the purpose specified.

No. 27,788.—GEORGE H. FAYMAN, of Washington, D. C.—*Improvement in Butt Hinges*.—Patent dated April 10, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A loose butt hinge, with a changeable axis to adapt it to being used on the right or left hand.

No. 27,789.—WILLIAM FINLAY, of Schoolcraft, Mich.—*Improvement in Seeding Harrows*.—Patent dated April 10, 1860.—The object of this invention is to throw the seed hopper out of gear with the traction wheel by a simple movement of the lever by the driver, and also the raising or depressing of the forward end of the machine, which is also controlled by the driver from his seat.

Claim.—The wheel H, arms N, bars K K, and connecting rod M, with the lever M¹, in combination with the seed hopper G, when the same are arranged and combined with the front adjustment of the revolving harrow frame, set forth, for the purposes specified.

No. 27,790.—R. H. FISHER, of Beverly, N. J.—*Improvement in Securing Handles for Cutlery*.—Patent dated April 10, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The described method of attaching handles to cutlery and other implements, to wit: having a flat tang B, with a barb *a*, fitted within a hole *b*, the mouth of which is sealed by the bolster *c*, and then introducing melted metal within the handle through the hole *d*, so as to surround and hold the tang, all as set forth.

No. 27,791.—GEORGE P. FOSTER, of Providence, R. I.—*Improvement in Cartridge Cases*.—Patent dated April 10, 1860.—This invention consists in making the cartridge case with a recess or grease chamber within its projecting head, which serves to close the joint of the breech of the gun.

Claim.—The improved cartridge case, as made with the grease chamber arranged within it and in its head, as specified.

No. 27,792.—THOMAS FRY, of Brooklyn, N. Y.—*Improved Chair Castor*.—Patent dated April 10, 1860.—This invention consists in affixing to the central stock *c* a permanent cap or base F around which the wheel or castor will revolve; also affixing a spring B made of India rubber or metal around the central stock *c*, to operate with the castor D with sufficient power to overcome the weight of the chair.

Claim.—The combination and arrangement of the stock *c*, the base F, the spring B, with the wheel D D, substantially as and for the purpose specified.

No. 27,793.—ADONIRAM J. FULLAM, of Springfield, Vt.—*Improvement in Punches*.—Patent dated April 10, 1860.—The claim and engravings explain the nature of this invention.

Claim.—An improved punch, as made with its side faces curved relatively to the stamping or end face of it, substantially as described.

No. 27,794.—ROLLIN GERMAIN, of Buffalo, N. Y.—*Improved Paddle Wheel*.—Patent dated April 10, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The construction of a paddle wheel for vessels for navigation, wherein the paddles are made and hung, substantially as set forth, in combination with a spring or springs placed upon the wheels, and so connecting with and acting upon the paddles as to hold them edgewise in the line of motion while passing through the atmosphere, and cause them to enter the water edgewise and allow them to glance or turn in the water (by the action of the water thereon) to a position transverse to the rims of the wheel, for the purposes and substantially as described.

No. 27,795.—CHARLES S. GRAVES, of Elyria, Ohio.—*Improvement in Horse Powers*.—Patent dated April 10, 1860.—This invention consists in providing upon the wheel that communicates the power and motion, a corrugated rim or edge, also a combination of friction rollers connected with the vibrating lever, which rim, by means of rollers, is brought in immediate connection with the end of the lever, thus dispensing with gearing and intermediate mechanism.

Claim.—The combination of the lever to be vibrated with the scalloped or corrugated edge of the driving wheel, substantially as set forth.

No. 27,796.—A. HAMMOND, of Jacksonville, Ill.—*Improvement in Ploughs*.—Patent dated April 10, 1860.—The object of this invention is to construct the machine in such a way that the standard for carrying the tooth or shoe may be adjusted longitudinally with the beam of the machine.

Claim.—The combination, with the standard D, of the movable plate J, adjusting set screw L, and friction rollers G G, arranged as set forth, so as to regulate the depth for forming the drain, and at the same time to facilitate the removal of the shoe from the ground.

No. 27,797.—HEMAN B. HAMMON, of Bristolville, Ohio.—*Improvement in Cultivator Teeth*.—Patent dated April 10, 1860.—In this invention the operator can set the arms at such angles that the forward blades will carry the soil from the centre between the rows each way,

so that the two back blades will carry the same soil to the hills, and the necessity of hilling up with a hoe be dispensed with.

Claim.—The employment of the grooved plate C in combination with a frame A and reversible arm B, having a projection *a*, as and for the purpose shown and described.

No. 27,798.—CHARLES T. HARRIS, of New Brunswick, N. J.—*Improvement in Vulcanizing Caoutchouc.*—Patent dated April 10, 1860.—This discovery consists in the combination of the gum to be cured with the sulphide of bismuth prior to heating the same to a temperature at which the curing takes place.

Claim.—The means, substantially as described, of curing India rubber and analogous gums, by combining them with an artificial sulphide of bismuth and heating the compound.

No. 27,799.—D. S. HARRIS, of Galena, Ill.—*Improved Spark Extinguisher for Steam Boilers.*—Patent dated April 10, 1860.—This invention consists in the use of a wire screen water trough, and water supply and discharge pipes, and also scrapers arranged inside of the smoke pipes of a furnace, so that the smoke and gaseous products of combustion will be readily allowed to escape and pass up the smoke pipe, while the sparks will be arrested, extinguished, and discharged from the lower part of the smoke pipe.

The inventor says: I *claim* the wire screens D, and troughs E, placed within the lower parts of the smoke pipes B, in connection with the proper water supply tubes F G, and discharge tubes *a*, substantially as and for the purpose set forth.

I further claim, in connection with the wire screens D, and troughs E, and water supply pipes, the scrapers H, as and for the purpose set forth.

No. 27,800.—EDWARD HATFIELD, of Brownsville, Pa.—*Improvement in Washboards.*—Patent dated April 10, 1860.—This invention consists in constructing the rubber of pottery, and inclosing the same in a proper frame to support it.

Claim.—As a new article of manufacture, a washboard with a rubber of pottery.

No. 27,801.—JOSEPH HIGGINBOTHAM, of Philadelphia, Pa.—*Improvement in Stop Valves.*—Patent dated April 10, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The guide D, with its slot *m*, the cup C, and spindle B, with its two slots crossing each other, in combination with the spindle H, and its cam G, when a part of said guide forms, in conjunction with the cap C, a stuffing box for the spindle B; and when the several parts are arranged in respect to each other and to the body of the valve, substantially as specified.

No. 27,802.—ANDREW HILLS, of Naugatuck, Conn.—*Improved Culinary Fork and Spoon.*—Patent dated April 10, 1860.—This invention consists in combining two ladles, or spoon shaped tongs with a fork, and in constructing them of two pieces of suitable steel wire bent up in a novel manner and attached to a handle that a guide and tongue are formed for preventing the lateral movement of the ladle arms.

Claim.—The double ladle C C, tongue and eye E E¹, springs G G, handle B, and fork J, when the same are constructed and arranged as represented and described—constituting a new article of manufacture.

No. 27,803.—ANSEL HOWARD, JR., of Readsborough, Vt.—*Improved Machine for Making Wooden Ware.*—Patent dated April 10, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the arrangement and combination of the two curved guides L L, and a shaft K, applied, as described, to a vertically moving frame, supporting cutters applied to it, substantially as specified.

I also claim the mechanism for rounding the external surface of the block or tray, or preparing such with a flat bottom and round sides and ends, the said mechanism consisting of the plane, the curved guide grooves and switches, arranged so as to operate substantially as specified.

No. 27,804.—DAVID HOWELL, of Louisville, Ky.—*Improved Trip Hammer.*—Patent dated April 10, 1860.—This invention consists in the employment for the lifting device of a trip hammer, of a cone cam constructed and arranged to slide on its driving shaft across that portion of the hammer on which the cam is brought to bear, and adapted through a lever, or screw, and a clutch, between whose sides it is laterally confined, to receive movement and adjustment while in motion, so that the lift and force may be graduated.

Claim.—The arrangement of the sliding conical cam F, feathered shaft E, sliding clutch G, rod H, and hammer C, when the parts are constructed, combined, and adapted in the manner set forth, to admit of varying the stroke of the hammer while in operation.

No. 27,805.—JOSEPH CHARLES HOWELLS, of Madison, Wis.—*Improvement in Needle Guards*.—Patent dated April 10, 1860.—In operating this invention the edge of a handkerchief, or other article to be hemmed, is slipped under the marker or gauge C, and drawn along, pressing the cloth against the sharp edge of the gauge so as to mark a straight line across the handkerchief just where the stitch is to be made; then the edge of the handkerchief is put into the snail, or hemmer B, so as to form the hem and the stitching is commenced, care being taken to make the stitch follow the line.

Claim.—As a new article of manufacture, the combination of the needle guard A, and hemmer B, whether the stitching gauge or knife be used therewith, or not, substantially as set forth, for the purpose specified.

No. 27,806.—HENRY CHARLES HOWELLS, of New York, N. Y.—*Improved Head Supporting Apparatus for Harvesters*.—Patent dated April 10, 1860.—The inventor says: This instrument I make entirely of pieces of steel marked *a*, with the exception of the parts marked *b*, which I make of elastic or non-elastic suitable material. All the pieces are jointed by rivets; the instrument is extended to the required length by the series of levers marked *a*; all the joints can be at once made rigid, when the instrument is extended, or closed, by the thumb screw *c*.

Claim.—The above described head rest, as a new article of manufacture, substantially as specified.

No. 27,807.—MARTIN A. HOWELL, JR., of Ottawa, Ill.—*Improvement in Corn Planters*.—Patent dated April 10, 1860.—This invention relates to a seed dropping device, whereby the seed may be dropped evenly or uniformly, and without the device used for the purpose becoming clogged, the device also working with but little friction and consequently but little wear and tear.

The inventor says: I *claim*, first, the employment or use of rocking seed cups E E, placed within or above the seed boxes D D, and provided with seed cells *f*, and flaps or valves *h*, or their equivalents, to operate as and for the purpose set forth.

Second. In combination with the rocking seed cups E E, and seed boxes D D, the slides or cut-offs G, operated from the rocking cups E E, substantially as and for the purpose set forth.

No. 27,808.—WILLIAM D. IVEY, of Milford, Ga.—*Improvement in Ploughs*.—Patent dated April 10, 1860.—This plough can be adjusted so as to cut deep or shallow, by screwing up, or unscrewing the nut *f*, which fits on the adjusting piece F.

Claim.—The combination and arrangement of the guard blade I, the wheel G, the plough D, frame E, and draft beam A, substantially as set forth.

No. 27,809.—JOSEF JOHNSON, of New York, N. Y.—*Improved Washing Machine*.—Patent dated April 10, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination and arrangement of an inclined washboard A, with the revolving disk E, which is parallel to and capable of sliding towards and from A, by the action of the same hand which operates it, substantially as and for the purposes set forth.

No. 27,810.—MATHAUS KAEFER, of New York, N. Y.—*Improved Chucks for Cutting Disks of Paper, &c.*—Patent dated April 10, 1860.—This invention consists of a hollow revolving cutter for cutting disks of paper, (for boxes, &c.,) with an improvement added, by which the paper outside of the cutter is drawn inwardly or expanded by the action of a screw upon the same.

Claim.—The hollow cutter *b*, arranged with screw threads around its outer surface, all substantially as set forth.

No. 27,811.—JOSEPH KEECH, of Waterloo, N. Y.—*Improved Washboard*.—Patent dated April 10, 1860.—This invention consists in the peculiar form given to the corrugations, or crimp of the rubbing surface or zinc plate, they being formed into an obtuse angular shape longitudinally, containing three angular points in the length of the crimp which extends from side to side of the frame crosswise.

Claim.—The obtuse angular shape given to the crimp or corrugations, longitudinally, constructed, arranged, and operating substantially as and for the purposes set forth.

No. 27,812.—JOHN E. KELLY, of New York, N. Y.—*Improvement in Mangers*.—Patent dated April 10, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The movable bottom to mangers and feed boxes, supported in such manner that they may be depressed to receive the given quantity of feed, and are raised and kept to the rack or bars by means of springs or weights, or their equivalents, in combination with a

feeding rack made horizontal or nearly so, in the manner described, and for the purposes specified.

No. 27,813.—LEONARD KILE, of Williamsfield, Ohio.—*Improvement in Upsetting Tire*.—Patent dated April 10, 1860.—A is an anvil block of cast iron, with a horn B shaped like a letter u projecting from its side. The upper face of the anvil is made concave from G to H; C D E F are keys, or wedges shaped like C, these fit in corresponding holes in the anvil A.

Claim.—The employment of the wedges C D E F, in combination with the concave faced anvil A, as and for the purpose shown and described.

No. 27,814.—MARCUS LAVEEN, of Moorefield, Va.—*Improved Fly Brush or Fan*.—Patent dated April 10, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of a ratchet wheel B¹, vibrating lever G, notched wheel K, fly wheel O, two spiral springs F P, and one or more fans A A, for the purpose of imparting a vibratory motion to the fan or fans, and thus creating an artificial motion of the air, substantially as set forth.

No. 27,815.—JOHN K. LEMON, of Toledo, Ohio.—*Improvement in Builders' Scaffolds*.—Patent dated April 10, 1860.—The uprights A are of quadrilateral form, and on each upright the rectangular metal bands C are placed, these bands are made of flat bars and are considerably longer than the uprights, sufficiently so to admit of a wedge-shaped block D being inserted in them.

Claim.—The employment of the slotted wedge blocks D, in combination with bands C, pins b, and uprights A, as and for the purpose shown and described.

No. 27,816.—DAVID C. LYALL, of New York, N. Y.—*Improvement in Supporting Window Sashes*.—Patent dated April 10, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement and use of the lever or bar m, slitted bearings s s, on both sides of the sashes, straight flat spring v, in combination with the triplet crank c c c¹, as applied to operating window sash, substantially as described and shown in the drawings.

No. 27,817.—THOMAS J. MAYALL, of Roxbury, Mass.—*Improvement in Substitutes for Emery Cloth*.—Patent dated April 10, 1860.—The claim explains the nature of this invention.

Claim.—The new article of manufacture, as a substitute for emery cloth, emery paper, or sand paper, the same consisting of a sheet of India rubber or gutta percha, of any desired thickness, with which emery or sand is incorporated and combined, cemented to a sheet of cloth or paper, or other backing, and subjected to heat, substantially as described, for the purpose of polishing, sharpening, or other similar purposes.

No. 27,818.—THOMAS J. MAYALL, of Roxbury, Mass.—*Improved Artificial Slate*.—Patent dated April 10, 1860.—The claim and engravings explain the nature of this invention.

Claim.—As an article of manufacture, a slate produced in the manner described, by combining in one piece and without seam or joint, the frame made of soft or elastic rubber or gutta percha, and the tablet formed of rubber or gutta percha, with which emery or sand, or other gritty material is incorporated, and constituting a comparatively hard and rigid substance, as set forth.

No. 27,819.—CHARLES MCBURNEY, of Roxbury, Mass.—*Improvement in Hose Tubing*.—Patent dated April 10, 1860.—The claim explains the nature of this invention.

Claim.—A hose for conveying liquids, having a woven fibrous exterior and a vulcanized India rubber interior, with an interposed layer of unsulphured rubber, as set forth for the purpose specified.

No. 27,820.—GEORGE B. MICKLE and J. M. CARVILLE, of New York, N. Y.—*Improved Truck for Fire Ladders*.—Patent dated April 10, 1860.—This invention consists in arranging the two parts of the truck with suitable sockets to receive the ends of the connecting beam or perch, so that the latter can be disconnected from one or both parts of the truck at pleasure; in arranging the wheels of the front part of the truck with suitable sockets in the hubs and with loops on the rims in such a manner that by inserting suitable bars into said loops and sockets the wheels are prevented from turning, keeping the front part of the truck from slipping while the ladder is raised and lowered; and also in combining a windlass at the lower end of the ladder with the front part of the truck in such a manner that by means of the windlass and the aid of the truck the ladders are raised and turned in any direction.

The inventors say: We claim, first, the arrangement of the sockets f, at the two parts B C

of the truck, in combination with the perch D, constructed and operating substantially as and for the purpose described.

Second. The arrangement of the loops *h*, and sockets *i*, on the wheels of the front part of the truck, to operate in combination with the crow bars E, substantially in the manner and for the purpose specified.

No. 27,821.—GEORGE B. MICKLE and J. M. CARVILLE, of New York, N. Y.—*Improved Extension Ladders*.—Patent dated April 10, 1860.—The object of this invention is to arrange a series of ladders in such a manner that they can be readily extended to any length, when used in combination, and be detached from each other with facility and used as occasion may require.

Claim.—In combination with the drums D E, on the shaft *a*¹, the ladders A B C, sliding strips *e*, and stops *f f*, substantially in the manner and for the purpose specified.

No. 27,822.—ISAAC MOTT, of Glenn's Falls, N. Y.—*Improvement in Laying Slate Roof*.—Patent dated April 10, 1860.—This invention consists in so laying rectangular slate on the roofs of houses that the side edges of the first diagonal course shall overlap and underlap one another about one third their width, and the lower edges of the second course overlap the upper edge of the first diagonal course about one third of the depth of the slates, and the side edges of said second course at the same time overlap and underlap one another, and so on until the roof is covered in a manner to expose nearly two thirds of the surface of each slate and present irregular courses.

Claim.—The peculiar method described and shown of laying rectangular slate on the roofs of houses, &c., for the purposes set forth.

No. 27,823.—DAVID NEEDHAM, of Oskaloosa, Iowa.—*Improvement in Tanning*.—Patent dated April 10, 1860.—The preparatory composition used in this invention is of the following ingredients and proportions: Hempseed, 1 peck; hops, 1 pound; sal soda, $\frac{1}{4}$ pound; animal brain, $\frac{1}{4}$ pound; boiled in eight gallons of water. After the hides are soaked in this liquor a proper length of time they are put in a tanning liquor consisting of catechu, divi-divi, alum, and salt, mixed together.

Claim.—The described process of tanning, consisting in the application to the hides of a solution composed of the specified materials, mixed in about the proportion specified, preparatory to treating them with the tanning liquid.

No. 27,824.—MORTIMER NELSON, of New York, N. Y.—*Improvement in Riding Saddles*.—Patent dated April 10, 1860.—4 4 are slides on the saddle tree *a*, receiving the cross piece *e*, in the ends of which the springs *f* rest; *d* is a screw operated from the back part of the saddle by which the springs *f* are moved nearer to or further from the pommel of the saddle, as the case may require.

Claim.—The arrangement of the two springs *f*, of rubber or equivalent material, the cross piece *e*, and screw *d*, in the manner and for the purposes specified.

No. 27,825.—J. M. PATTERSON and J. F. MORRELL, of Woodbury, N. J.—*Improved Washing Machine*.—Patent dated April 10, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim*, first, the metallic, hollow, air-tight corrugated cylinder A, and the metallic concave and corrugated bottomed case or tub B, the same being constructed and arranged together in the manner and for the purpose set forth and described.

Second. We also claim giving the semi-rotary oscillating motion to the cylinder A, when the same is suspended over the concave B, as described, by means of the levers *l l*, cords *n n*, pulleys *j j*, hand levers *m m*, and the springs *o o*, the same being constructed and arranged in relation to each other on the machine, in the manner set forth and described.

No. 27,826.—JACOB L. PAXSON, of Norristown, Pa.—*Improvement in Harvesters*.—Patent dated April 10, 1860.—J is a vibrating rack having teeth *j* for giving an oscillating motion to the knife or knives G. K is a plate which covers the knife rack J and knives G to protect them from dust, &c. L L are bars which are hung at the upper end by the axle B, and are connected at their lower end with the finger bar E. M is a guard of the finger bar E and lever Q; it is fastened by means of bolts on the under side of the bars L.

The inventor says: I *claim* the combination of the forked lever Q, and yokes R R, with shaft B, and the cutting apparatus, the parts being constructed, arranged, and operated in the manner and for the purpose specified.

Also, the peculiar manner of connecting the platform frame with the main frame (which is supported by the wheels C D) by the bars L L, and the bolts *h i*, the parts being arranged and connected in the manner and for the purpose substantially as set forth.

No. 27,827.—W. H. PEASE, of Goshen, Ind.—*Improved Machine for Curving Marble, &c.*—Patent dated April 10, 1860.—This invention consists in the employment of a system of levers known as lazy tongs, provided with an index and cutter.

Claim.—The levers *g h n*, arranged, as shown, to form the lazy tongs, provided within the joint *D*, and the arbors *H G¹*, operated from the driving shaft by means of the gear and belts, substantially as and for the purposes set forth.

No. 27,828.—JOHN G. PERRY, of South Kingston, R. I.—*Improved Sausage Stuffer.*—Patent dated April 10, 1860.—The operation of this machine is as follows: By turning the crank, the lever gear on the shaft *G* causes the plate *B* to revolve, and that turns the smaller wheel *C* by the studs *o o* meshing into the recesses of it; as the meat is put into the hopper it falls on the plate *B*, and is carried in between the wheel *C* and the studs *o o*; and as it approaches the point where the studs enter the recesses of the smaller wheel *C*, it is pressed through between the studs into the pipe, and out through into the cases which are placed upon it.

Claim.—Combining the plate or wheel *B* with the tube *H*, substantially as described and for the purposes set forth.

No. 27,829.—SALMON R. PLUMB, of Southampton, Conn.—*Improved Sausage Stuffer.*—Patent dated April 10, 1860.—This invention consists in the arrangement of a right and left screw on the same shaft, operating by turning it within a suitable case, and a slotted sliding plate, to receive and readily force the cut meat within the sausage skin.

Claim.—The arrangement and combination of case *A*, revolving right and left handed screw *B*, and sliding plate *C*, essentially in the manner and for the purposes fully set forth and described.

No. 27,830.—EUGENE POWELL, of Conneautville, Penn.—*Improvement in Cane Presses.*—Patent dated April 10, 1860.—In the upper part of the frame *A* a cylinder *B* is placed, the journals *a* of which are fitted in permanent bearings in the frame *A*. On the outer end of each journal a toothed wheel *C* is placed; the wheels *C* gear into the pinions *D* at the ends of the cylinders *D¹*, the journals *b* of which are fitted in curved or segment bars *E*, one at each side of the frame *A*. At each side of the frame there is secured a semi-circular plate *E*, which extend down below the upper parts of the ends of the cylinder *D¹*.

Claim.—The combination, with the basin *F*, plates *E¹ E¹*, cylinders *D¹*, and cylinder *B*, of the curved plate *G*, when provided with tubes *H*, as and for the purpose shown and described.

No. 27,831.—CURT PRETSCH, of Trenton, N. J.—*Improved Reading and Writing Desk.*—Patent dated April 10, 1860.—This invention relates to a portable reading and writing desk, to be attached to the side of a bedstead rail, to a chair, or other like article of furniture, for the use of invalids or those who are not able to hold a book constantly.

Claim.—The combination of the adjustable ledge *J*, strip *E*, and tablet *D*, with the drawer *C*, box *A*, rack box *B*, bracket *L*, and adjustable rod *M*, as and for the purpose shown and described.

No. 27,832.—LEWIS C. REESE, of Phillipsburg, N. J.—*Improvement in Harvesters.*—Patent dated April 10, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination of the arms *G*, provided respectively with bars *I*, and one or more rakes *I¹*, with swivels *d*, connected by joints *c* to a rotating shaft *E*, and by friction rollers or other suitable means to guide *H*, to operate as set forth.

Second. The employment or use, in connection with the guide *H*, of the slotted arms *F*, attached to the shaft *E*, and arranged, as described, to receive the arms *G*, and retain the same in a proper relative position with each other, and arranged for adjustment, substantially as described.

No. 27,833.—ANDRE SABATIER, of New York, N. Y.—*Improved Varnish.*—Patent dated April 10, 1860.—The component parts of this invention are as follows: Alcohol $1\frac{1}{2}$ pints, spirits of turpentine $1\frac{1}{2}$ gills, alkanet 1 ounce, sulphate of iron 1 ounce, gum benzoin 1 ounce, gum sandarac 4 ounces, and $\frac{1}{4}$ ounce of lamp black.

Claim.—The varnish composed of the several ingredients specified, in about the proportions set forth.

No. 27,834.—JACOB SCHAEFER, of Henderson, Ky.—*Improvement in Grain Separators.*—Patent dated April 10, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Having the rear end of the first chaff riddle attached to a revolving crank shaft *K*, and its front end hinged to a suspended swinging frame, which contains a second chaff sieve and a grain sieve, substantially as and for the purposes set forth.

No. 27,835.—L. K. SELDEN, of Haddam, Conn.—*Improved Childs' Cradle.*—Patent dated April 10, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, a cradle body made of suitable strips jointed together and capable of being folded up, as described and represented.

Second. The rockers B B, composed of pieces B¹, arranged and applied so as to serve the two-fold purpose of a brace and spring, as set forth.

No. 27,836.—D. P. SHARP and L. MOOD, of Ithaca, N. Y.—*Improved Washing Machine*.—Patent dated April 10, 1860.—This invention consists in the employment of one or more pumps placed in a proper box or case, and used in connection with a press to receive the clothes, the press being placed in the same box or case with the pump, and the pump cylinders connected with the press by a suitable pipe.

The inventors say: We *claim* the force pump B, one or more, in combination with the clothes press formed of the box F and follower H, the pumps and clothes press being placed within a case or box A, and all arranged to operate substantially as and for the purpose set forth.

We further claim the ledges *d f*, respectively, on the bottom G, and follower H of the press, when used in connection with the pumps B, for the purpose specified.

No. 27,837.—C. F. EDWARD SIMON, of Washington Town, N. J.—*Improvement in Restoring Waste Vulcanized Rubber*.—Patent dated April 10, 1860.—The claim explains the nature of this invention.

Claim.—The mixing of the ground, or cut, or torn waste of vulcanized India rubber with chloride of lime, in the manner described, and the exposing of the same to a heat of 900°–1,200° Fah. for the time and in the manner substantially pointed out.

No. 27,838.—HENRY SIMON, of Providence, R. I.—*Improved Shirt Stud*.—Patent dated April 10, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the movable hooklike shank *b*, applied to slide in a slot in the back of the head, and the spring *c* applied to the said shank, to operate as described, in combination with the fixed hooklike shank *b*.

No. 27,839.—ROBERT A. SMITH, of New York, N. Y.—*Improved Machine for Sweeping Streets*.—Patent dated April 10, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, hanging the main broom shaft G, in swinging arms H H, from the axle C³, so that said shaft will have a direct motion from the driving wheel C², substantially as set forth.

Second. In combination with the main broom shaft, hung as set forth, I claim the rods *c*, arms *a a*¹, shaft *b*, and rod I, connecting with the lever I¹, for the purpose of enabling the driver to raise or depress this broom shaft at pleasure, as set forth.

Third. I claim giving to the main broom shaft G a yielding action, so that it will adapt itself to the inequalities of the street surface, whether effected by the arrangement of arms and connecting rods and springs *e e*, as described, or in any other way, substantially as described.

Fourth. I claim the universal coupling of the main broom shaft with the adjustable hanger 8, for the purposes substantially as set forth.

Fifth. I claim the adjustable hangers 1 1, with the chain pulleys 5 5, and secondary broom shaft, when the same are arranged in relation to the pan N, or its equivalent, as described and represented, for the purpose of adjusting the brush shaft and keeping the brush in contact with this pan, at the same time to tighten up the chain as it wears loose on the pulleys.

Sixth. I claim the adjustable swinging trap or box L, suspended over the main brooms and in rear of the same, for the purposes and substantially as described and represented.

Seventh. I claim arranging in front of the secondary broom cylinder, and in a suitable relation with the conducting pan N, a dirt receiver R, supplied by any suitable mechanism by which the box may be emptied of its contents at suitable intervals.

Eighth. I claim the guard board T, placed between the front and rear brooms, for the purposes and as described and represented.

No. 27,840.—E. S. SNELL, of North Bridgewater, Mass.—*Improvement in Edge Planes for Boots and Shoes*.—Patent dated April 10, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The detachable blade C, with a curved moulded face *e*, when the same is made adjustable on the curved top of the shank B, substantially as described.

No. 27,841.—N. T. SPEAR, of New York, N. Y.—*Improvement in Corn Huskers*.—Patent dated April 10, 1860.—In the lower vibrating end of the apron G is a roller N, the axis of which is parallel to that of the cylinders C E. The roller N is quite small, and between this and the cylinders the ears of corn are held while the husks are stripped off.

Claim.—Providing the lower extremity of the hinged yielding apron G with one or more

rollers N, arranged as described, and operating in combination with the husking cylinders C and E, in the manner and for the purpose specified.

No. 27,842.—D. S. STOMBS, of Newport, Ky., and JULIUS BRACE, of Point Creek, Va.—*Improvement in the Distillation of Coal Oil*.—Patent dated April 10, 1860.—This invention consists in separating from the crude oil the various products contained therein, by volatilizing it over the surface, or upon, as it were, a bath of the fluid having a higher specific gravity, and heated to a degree of temperature at which the fluid to separate from the crude oil volatilizes.

Claim.—The herein described process of redistilling crude oil or other oils, by means of an apparatus constructed on the principle substantially as specified.

No. 27,843.—GEORGE A. STONE, of Roxbury, and JAMES A. WHIPPLE, of Boston, Mass.—*Improved Steam Boiler*.—Patent dated April 10, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim*, first, the combination of tubes sloping upward, and arranged in rows relatively to each other, substantially as specified, with water spaces connecting with these tubes and substantially surrounding a vertical tube box, the combination being substantially as described, for the purposes specified.

Second. We claim combining the shell of a boiler with the heating surface *d*, or evaporating surface thereof, by means of a stuffing box and a joint, substantially such as are specified, for the purposes set forth.

Third. We claim combining with the boiler shell an inside lining of wood, or other non-conducting material, arranged therein substantially in the manner and for the purposes described.

Lastly. We claim, in combination with a tube box, supporting tubes, arranged substantially in the manner described, and the steam space of a boiler, a foam plate, arranged substantially in the manner set forth, for the purpose described.

No. 27,844.—A. B. STROUP, of Waldron, Ind.—*Improved Bed Cord Tightener*.—Patent dated April 10, 1860.—This invention consists in the arrangement and combination of parts, by which the operator is enabled to cord any ordinary bedstead with facility as tight as may be desired.

Claim.—The combination and arrangement of the plates A and B, tube C, wheel E, hooks F, spring H, substantially as and for the purpose specified.

No. 27,845.—MYRON E. TAFT, of Potsdam, N. Y.—*Improvement in Cheese Presses*.—Patent dated April 10, 1860.—This invention consists in making the cross head and the table vertically adjustable, and in connecting with the cross head, in the employment of a jointed bar arranged along one side of the head, having curved arms, which, with similar arms on the opposite side of the head and fixed to it, the cheese hoop may be secured in place on the table, and the machine adapted to receive various sizes of hoops.

Claim.—The combination, with the adjustable cross head and table, of the fixed and movable holding arms J J, and horizontal pressing screws G G, all arranged as and for the purpose set forth.

No. 27,846.—HENRY UNDERWOOD, of New York, N. Y.—*Improvement in Belting*.—Patent dated April 10, 1860.—This invention consists in the employment of a belt of trapezoidal shape, in connection with an angular grooved pulley, whereby a greater surface of the belt is brought in contact with the sides of the groove than with either the round or flat belt.

Claim.—The trapezoidal belt for machinery, as described and represented, forming a new article of manufacture.

No. 27,847.—CHARLES L. VASQUEZ, of Philadelphia, Pa., assignor to R. H. GRATZ, of said Philadelphia.—*Improvement in Dry Gas Meters*.—Patent dated April 10, 1860.—This invention consists in forming between the bevel of the valve seat and the measuring compartments, a chamber and inlet pipe arranged so as to convey the gas to the central opening of the valve seat, and so as to afford a means of drawing off the condensed vapor without encroaching upon the necessary space occupied by the measuring chambers, and without interfering with the proper action of the diaphragms.

Claim.—Forming between the level of the valve seat and the measuring compartments of a dry gas meter, a chamber D, and an inlet pipe G, communicating with the same, both pipe and chamber being arranged in respect to the plate A, substantially as and for the purpose set forth.

No. 27,848.—WILLIAM F. WARBURTON and C. E. LOVETT, of Philadelphia, Pa.—*Improvement in the Manufacture of Hats*.—Patent dated April 10, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The process of attaching the lining to the interior of the hat by means of an elastic cement simultaneously with the finishing of the exterior of the hat, as set forth.

No. 27,849.—BURGAN B. WESCOTT, of Camden, Ind.—*Improved Washing Machine.*—Patent dated April 10, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the tub A, support H, lever F, standard E, and rods *a a*, with the rubber D, and spring C, when said spring is so secured between the lever and the rubber, that increased pressure will be added to the said rubber, as the rods *a a* assume a greater inclination, and when it assists in returning the rubber to its normal position, and elevating the levers, substantially as specified.

No. 27,850.—JOHN L. WHETSTONE, of Cincinnati, Ohio.—*Improvement in Running Gear of Locomotive Engines.*—Patent dated April 10, 1860.—E is the vibrating truck frame, and F F the truck wheels. The front end of the truck frame contains the boxes for the axle G of the wheels F forming the base of the triangle, and the rear end is connected with a strong cross bar H, whose ends are connected by hangers *b b* with the spring *c² C²* of the forward drivers.

Claim.—The combination of the truck frame E, with the springs *C²* of the front drivers substantially as and for the purpose shown and described.

No. 27,851.—JOHN WILLIAMS, of Kalamazoo, Mich.—*Improvement in Machines for Weighing Grain.*—Patent dated April 10, 1860.—When this machine is in operation the grain passes through the chute until the hopper receives the necessary quantity to depress it sufficiently to drop the rim *d* below the stop *f*; this permits the hopper to revolve 180°, discharge its contents, and be again stopped by the stop *f* entering the opposite opening *d*.

The inventor says: I *claim*, first, the revolving hopper H, in combination with the bar D, connected with beam weights W, at the extremities of cords *k*, and the attachment of said cords to the valves, substantially as specified, so as to regulate the cutting off of grain by the weighing operation without making the proper action of the hopper dependent on the successful operation of the cut-off.

Second. The adjustable stop *f*, in combination with the openings *e*, in the rim *d*, bar D, adjustable stop *t*, scale beam and weight, arranged and operating substantially as and for the purposes set forth.

No. 27,852.—BENNETT F. WITT, of Dublin, Ind.—*Improvement in Harvesting Machines.*—Patent dated April 10, 1860.—This invention consists in the construction and arrangement of a supplementary carriage coupled loosely to the side of a harvesting machine, for the purpose of carrying one or more binders, the said carriage being supported at one side upon its own wheels, so as to be adapted to accommodate itself to the undulations in the surface of the ground and compensate for the side draft of the machine.

Claim.—The two wheel binder's carriage H, constructed, arranged, and connected in the manner described, with the reaping machine adapted for side delivery, the parts operating in combination, substantially as and for the purposes specified.

No. 27,853.—CALVIN WOODWARD and GEORGE M. WOODWARD, of New York, N. Y.—*Improvement in Feed Water Apparatus for Steam Boilers.*—Patent dated April 10, 1860.—C is the cylinder which fits nicely into the jacket, being retained in the same by the nuts *e*, which screw up steam tight against the edges of the jacket. The interior of this cylinder is smooth and open at both ends. Three pistons D, E, F, which are secured to a common piston rod G, at equal distances from each other, work steam tight in said cylinder, and the piston rod connects by means of a connection rod *f*, with an eccentric wrist pin *g*, on a disk *h*, to which a rotary motion is imparted from some part of the engine.

Claim.—The arrangement and combination of the three pistons D, E, F, and rod G, with the perforated cylinder C, and jacket B, as and for the purpose shown and described.

No. 27,854.—WILLIAM E. WORTHEN, of New York, N. Y.—*Improved Lock.*—Patent dated April 10, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the combination of an oscillating or revolving tumbler, such as described, with a door, bolt, and locking slide, substantially such as specified, the whole operating substantially as set forth.

And, in combination with a bolt and tumbler, substantially such as specified, I claim the notches *h h¹*, and a stud *g*, or their equivalents, for limiting the range of motion of the tumbler.

No. 27,855.—JOHN WYBERD, of New York, N. Y.—*Improved Night Light Reflector.*—Patent dated April 10, 1860.—This invention consists in suspending over the burner a reflector of octagonal shape, composed of a series of metallic plates, each series decreasing in circum-

ference and placed above each other and connected by standards of iron or wire, leaving the space between them open for ventilation. The surfaces of the plates are also corrugated so as to assist in diffusing the light.

Claim.—The dome-like arrangement of a system of corrugated reflectors, with alternate ventilating spaces, as set forth.

No. 27,856.—JOSEPH ZEIGLER, of Baltimore, Md.—*Improved Alarm Lock.*—Patent dated April 10, 1860.—This invention consists in controlling the opening of the cash drawer by means of a treadle attached to the floor, and combining at will with a bell trigger in such a manner that the drawer cannot be opened without an alarm being sounded.

The inventor says: I *claim* controlling the opening of a drawer by means of a treadle operated by the foot, substantially in the manner described.

I also claim connecting or disconnecting, at will, the treadle which controls the drawer with an alarm bell, substantially in the manner and for the purpose set forth.

No. 27,857.—AUGUSTUS C. CAREY, of Lynn, Mass., assignor to himself and JOSEPH STORY, of Boston, Mass.—*Improvement in the Manufacture of Bank Notes.*—Patent dated April 10, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The improvement in the manufacture of bank notes, checks, bills of exchange, &c., which consists in uniting two or more layers or sheets of paper or other suitable material, upon or through one or more of which layers or sheets distinctive letters, figures, or configurations have been previously formed, either by puncturing one or more, but never the whole, of the said layers or sheets, or by printing, coloring, or otherwise making distinctive marks upon either of the inner surfaces of the said layers or sheets.

No. 27,858.—EDMUND B. CHEREVOY, of New York, N. Y., assignor to himself and THOMAS W. WEATHERED, of said New York.—*Improvement in Boilers for Hot Water Apparatus.*—The invention consists of a series of hollow flat water chambers arranged around the inside of a dome shaped boiler, formed by a double casing containing water.

Claim.—The radial water chambers *k k k*, arranged within the conical water casing, as set forth, when connected to the said casing or dome by the screw thimbles, as specified.

No. 27,859.—JAMES CONNELL, of Port Huron, Mich., assignor to himself, CHRISTIAN CONNELL, and WILLIAM CONNELL, of said Port Huron.—*Improvement in Concentrated Extracts for Tanning Purposes.*—Patent dated April 10, 1860.—The object of this invention is the production, as an article of manufacture and commerce, of a concentrated aqueous extract of the tanning and coloring principles contained in trees and shrubs, that will resist the action of the atmosphere, and will not be liable to ferment or decompose.

Claim.—As a new article of manufacture, a concentrated aqueous extract of the tanning and coloring principle contained in trees and shrubs, when prepared substantially in the manner described.

No. 27,860.—JAMES C. COOKE, of Middletown, Conn., assignor to the RUSSELL MANUFACTURING COMPANY, of said Middletown.—*Improvement in Looms.*—Patent dated April 10, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the application of a friction clamp or apparatus to each or both rollers carried by the rocker levers, and operating the said levers by cams, substantially as described.

I also claim the combination and arrangement of one or more guide rollers or rods *a b*, with the two rollers *L M*, and their supporting levers, the same being to operate in manner as specified.

No. 27,861.—J. F. FULLER, of Louisville, Ky., assignor to himself and JOSEPH LANDES, of said Louisville.—*Improvement in Casting Door Numbers.*—Patent dated April 10, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Forming ribs or projections *a a* on the backs of letters, numerals, symbols, or ornamental designs of any description, in such a manner that they may be clamped and held by a bar or by bars *B B*, in suitable combinations, while an impression in sand or other material is taken, and then removed from the bar or bars, and others introduced at pleasure, substantially as and for the purposes described and represented.

No. 27,862.—CHARLES A. GALE, of Boston, Mass., assignor to himself and SPENCER RUSSELL, of said Boston.—*Improved Automatic Mosquito Fan.*—Patent dated April 10, 1860.—The inner end of the staff projects between two cams *F G*, arranged on opposite sides of a shaft *H*, and supported by two disks *I I* fixed to such shaft. These cams, while the shaft is in revolution, operate alternately on the flag staff, so as to first move it horizontally in one direction, and next in the opposite.

Claim.—Improved arrangement of the fan or flag staff, the reversed cams, the cam shaft, and the clock-work mechanism for effecting the rotations of such cam shaft, the whole being made to operate substantially as described.

No. 27,863.—PHILETUS W. GATES, of Chicago, Ill., assignor to himself, THOMAS CHALMERS and D. R. FRASER, of said Chicago.—*Improvement in Crushing Rollers for Sugar Mills.* Patent dated April 10, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Making a portion of the surface of the rollers A A¹ B concave circumferentially, substantially as and for the purposes set forth.

No. 27,864.—EDWARD LYNCH, of Buffalo, N. Y., assignor to himself and JAMES J. McCool, of said Buffalo.—*Improved Churn.*—Patent dated April 10, 1860.—H is the break; it consists of a central ring *h*¹, having radial arms *h*², which extend from the ring to the sides of the churn; vertical grooves *i* are made in the sides of the churn to receive the ends of these arms when the breaker is put into the churn so that it will not revolve when the dash blades are put in motion.

The inventor says: I *claim*, first, the floating break H, constructed with a vertical ring *n*¹, and bevelled radial arms *h*², operating in combination with vertical grooves *i* in the sides of the churn, in the manner and for the purposes explained.

Second. The combination of the tube L and faucet M, constructed, arranged, and operating substantially as and for the purposes set forth.

No. 27,865.—THOMAS LINDSEY, of Lincoln, Ill., assignor to himself and J. H. BEIDLER, of said Lincoln.—*Improvement in Seeding Machines.*—Patent dated April 10, 1860.—The flexible tubes *p* are attached alternately to the tubes *q*, and to the lower end of each tube *q* a share D is attached. These shares are of double mould board form, and have inclined back edges to admit the earth to pass behind and fall into and fill up the furrows, and cover the seed therewith.

Claim.—The arrangement of the notched slide C, wheels *h*, oblique partitions *l*, seed cells *k*, tubes *q p*, and shares D, as and for the purpose shown and described.

No. 27,866.—JOHN McMURTRY, of Fayette County, Ky., assignor to FARMER DEWEES, of Lexington, Ky.—*Improved Mode of Securing Metal Hoops on Cotton Bales.*—Patent dated April 10, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The bending of the ends of metal hoops or bales, substantially as described, for the purpose of making the fastening of the ends of the same, as shown in the accompanying drawings, for the purposes set forth.

No. 27,867.—WARREN MILLAR, of Chicago, Ill., assignor to himself and JOHN NUTT, of said Chicago.—*Improvement in Sewing Machines.*—Patent dated April 10, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the bobbin case N, made up of the two curved disks *b b*¹, the one disk *b*, having a hollow female screw *d*, an eye or pulley *e*, and a hole *f*, and the other disk *b*¹, having a hollow male screw *g*, which allows of the passage of the thread, and in connection with the screw *d*, secures the disks to each other, as set forth.

And in combination with the bobbin case N, constructed as described, and a needle of a sewing machine, I *claim* the oscillating curved barbed looper P, having a groove *i*, at the base of its barb for the thread of the loop, and its point prolonged, as set forth.

No. 27,868.—FREDERICK D. NEWBURY, of Albany, N. Y., assignor to RICHARD V. DE WITT, JR., of said Albany.—*Improvement in Revolving Fire Arms.*—Patent dated April 10, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the apparatus for enabling the hammer and trigger to be operated in concert with each other, whether the hammer be set by hand or by the trigger; viz: 1. The bar *f* attached to the hammer, and working along the side of the trigger, in order to catch into the pin *p*, in combination with the balance catch lever *g*, operating as described. 2. Also the pin *d* in bar *f*, operating through the slot *t*, and in combination with it and spring *u*, or the mechanical equivalents for said apparatus, the whole operating together in manner and for the purposes set forth.

I also *claim* the combined action of the trigger and pin *k*, with lever V, in operating the cylinder, so that when the lever has turned the cylinder to bring a chamber in it and the barrel to coincide, the toe or front point *a* of the trigger shall, jointly with the pin *k* and lever V, hold the cylinder during the discharge of the piece, in the manner shown and described.

No. 27,869.—SAMUEL RAY and M. R. SHALTERS, of Alliance, Ohio.—*Improvement in Mowing Machines.*—Patent dated April 10, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim*, first, the arrangement of the hinged bent lever M, segment rack N, sector O, curved rack Q, crank P, perforated pendants or guides *g g*, brace *i*, and finger bar S, the several parts constructed and combined in the manner and for the purposes described.

Second. The arrangement of the plate R with the pendants or guides *g g*, provided with notches *g¹*, finger bar S, and lever M, so as to admit of the turning back of the finger bar and sickle parallel with the frame A, by raising the finger bar and sickle, and at the same time admit of the finger bar and sickle being retained rigidly at right angles with the line of draft, when the machine is at work, substantially as set forth.

Third. The arrangement of the spring *t¹* with the yielding movable bar X, furnished with a pin *t*, in combination with the hollow perforated socket V *s*, and stationary bar W, in the manner described, so that the track clearer is capable of vibrating or yielding, and also may be easily adjusted without stopping the team, as set forth.

No. 27,870.—HENRY C. SMITH, of Cleveland, Ohio, assignor to ANSON SMITH, of said Cleveland.—*Improved Washing Machine*.—Patent dated April 10, 1860.—The claim and engravings explain the nature of this invention.

Claim.—So arranging the tub that it may be actuated by means applied to its side, as set forth, in connection with a rubber that may be adjusted vertically, and so connected to the frame of the machine as to allow of its being turned out from the tub, as described.

No. 27,871.—WILLIAM H. TENDLER, of Cambridge, Mass., assignor to himself and JOHN F. MOESCHLIN, of said Cambridge.—*Improved Sofa Bedstead*.—Patent dated April 10, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* constructing the bed foundation C, in two parts *e f*, and applying the part *e* to the seat B, and the rear half *f* to the front half *e*, so as to operate therewith and with respect to the sofa frame, as described.

I also claim arranging and combining a bed clothes space or receptacle *l*, with the seat B, and the bed foundation C, constructed and applied to the seat and the sofa frame, so as to operate as described.

No. 27,872.—FREEMAN WALCOTT, of Milford, Mass., assignor to himself and F. A. COFFIN, of Newburyport, Mass.—*Improvement in Board Roofing*.—Patent dated April 10, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A roof covering formed of a double series of boards grooved over their entire surface, as set forth for the purpose specified.

No. 27,873.—CHARLES H. WARNER, of Brooklyn, N. Y., assignor to the BROOKLYN FLINT GLASS COMPANY, of said Brooklyn.—*Improvement in Glass Moulds*.—Patent dated April 10, 1860.—The claim and engravings explain the nature of this invention.

Claim.—I claim the mechanism for moulding glass for vault lights and other purposes, by which it is subjected to two consecutive pressures, one being applied for forcing or injecting and pressing the melted glass properly into the mould or moulds, and the other being applied during the cooling operation of the glass in the moulds, substantially as and for the purpose set forth.

I also claim the employment or use of a forcing or induction plunger H, or H¹, in connection with pressure plungers D D¹, and moulds *a a¹*, arranged to operate substantially as and for the purpose specified.

No. 27,874.—GEORGE P. FOSTER, of Providence, R. I.—*Improvement in Breech Loading Fire-Arms*.—Patent dated April 10, 1860.—This invention consists in the arrangement of a latch and catch in advance of the trigger, so that the latch may extend under the trigger and be movable with and have its fulcrum carried by the guard lever for operating the movable breech or charge holder.

Claim.—The arrangement of the latch F, and its catch G, relatively to the trigger, and the guard lever D of the movable breech part, as described.

No. 27,875.—WILLIAM W. HUSE, of Brooklyn, N. Y.—*Improved Steering Apparatus*.—Patent dated April 10, 1860.—This invention consists in the employment of one or more columns of water, or other non-compressible liquid, for the purpose of transmitting the motion of the steering wheel to the rudder; and also in arranging the wheel on a screw shaft connecting with a piston that moves in an air or water-tight cylinder, the ends of which connect by suitable tubes with two barrels furnished with plungers connecting with the arms of the tiller extending at opposite sides from the rudder head in such a manner that, when said cylinder is filled, the motion of the wheel in one direction or the other is transmitted to the rudder, no matter how far the distance between the wheel and the rudder may be.

The inventor says: I *claim*, first, the employment of one or more columns of water, or other liquid, for the purpose of transmitting the motion of the steering wheel to the rudder, substantially in the manner described.

Second. The arrangement of the cylinder E and barrels F F¹, in combination with the tiller g g¹ and wheel C, constructed and operating substantially in the manner and for the purpose specified.

No. 27,876.—WILLIAM C. ARTHUR, of Baltimore, Md.—*Improvement in Oil Cans*.—Patent dated April 10, 1860.—A is a spring constructed of a simple piece of wire of any desired form; one end of this spring is fastened to the side of the can b, the opposite end is left free. To the free end of the spring is attached a rod d, which passes through the opening in the top of the can and terminates in a button e. In the upper part of the spout a valve seat i is fixed; this valve seat is placed in such a position that when the two parts of the spout are brought into their proper places the leathered portion of the rod comes in close contact with it.

Claim.—The combination of the spring A, with the valve in the spout, arranged as above described.

No. 27,877.—STEPHEN M. ALLEN, of Niagara Falls, N. Y.—*Improvement in the Manufacture of Thread and Yarn*.—Patent dated April 17, 1860.—The claim explains the nature of this invention.

Claim.—The new article of manufacture, the same consisting in thread and yarn, made by combining ordinary short stapled fibrous materials like cotton or wool, with a short fibre prepared from long stapled fibrous materials, like flax, hemp, jute, silk, china, glass, and similar substances, by both the described mechanical reduction and chemical treatment referred to, so that when so combined they can be spun on the ordinary cotton and woolen machinery.

No. 27,878.—STEPHEN M. ALLEN, of Niagara Falls, N. Y.—*Improvement in the Method of Reducing Long Staple Fibrous Materials*.—Patent dated April 17, 1860.—The claim explains the nature of this invention.

Claim.—The method described of preparing long stapled vegetable fibrous material, for the purpose of spinning therefrom both coarse and fine yarn or thread, by combining the described mechanical reduction of the said fibre, with its chemical treatment, as set forth.

No. 27,879.—CALEB BATES, of Kingston, Mass.—*Improvement in Stump Extractors*.—Patent dated April 17, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the employment of the crossed pawls E F, in combination with the rack bar G, head B, and levers C C, as and for the purpose shown and described.

I also claim the arrangement of the pivots or pins on which the pawls E F turn, above the plane of the bearing edges of the trunnions g g, so that the fulcra of the lifting levers will shorten as the levers descend, and the lifting power will be correspondingly increased.

I further claim the employment of the knife edged trunnions g g, in combination with the head B, and pendulous rods e e, as and for the purpose shown and described.

No. 27,880.—THOMAS H. BELL, of Washington, D. C.—*Improvement in Hanging Bells*.—Patent dated April 17, 1860.—This invention consists in constructing and combining the several parts of the apparatus in such a manner that by shifting their relative positions the apparatus will allow the pull wire, or wire which operates the bell, to run off in any desirable direction.

Claim.—Constructing and combining the several parts of the apparatus, substantially as before described, so as to admit of the "pull wire" running off in any desired direction.

No. 27,881.—WILLIAM A. BIRD, of Newark, N. J.—*Improvement in Sliding Carriage Seats*.—Patent dated April 17, 1860.—This invention consists in rendering the seat firm and quiet, yet easy to move by means of irons peculiarly constructed and adapted thereto.

The inventor says: I *claim* the steady pins, be they more or less than two, and the eye pieces, when constructed, arranged, and operated substantially in the manner and for the purpose set forth.

Also, the irons V and W, when used in connection with the steady pins, to insure the firmness of the seat.

No. 27,882.—ELI W. BLAKE, of New Haven, Conn.—*Improvement in Machines for Breaking Stones*.—Patent dated April 17, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, constructing and supporting the fixed jaw of the said

machine for breaking stones in such manner that it can be inverted when worn, and confining it to its place by the check pieces, as described.

Second. Transferring the point of support and motion of the movable jaw from below to above its acting face, as described.

Third. The employment of the toggle block and wedge, as described, for the more convenient and precise adjustment of the size of the opening which determines the size of the fragments.

No. 27,883.—WILSON BOHANNAN, of Baltimore, Md.—*Improved Padlock*.—Patent dated April 17, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Arranging the bolt C^1 on top of the bolt C , and pivoting the two together by means of a pivot a , and controlling the operation of the same by means of the two guide stops $D D^1$ and two springs $F^1 F^1$, in the manner and for the purpose described.

No. 27,884.—S. D. BOWKER, of Geneva, Ohio.—*Improvement in Self-detaching Whiffletrees*.—Patent dated April 17, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the peculiar lever L , in combination with the ring G and the spring F , attached to the cylindrical box D , the said lever being provided with a raised part O and tongue N , and said ring with notches H and I , and slant or trimmed portion K , as described, and operating as and for the purposes set forth.

Second. I claim the employment of the hollow cylindrical box D , for holding and sustaining the bar or body of the whiffletree, so that it is free to turn therein; also, the mode of attaching the whiffletree to the doubletree, or the draw bar of the thills, by means of the shank E and screw nut, for the purpose of maintaining its ordinary horizontal movement, as described.

No. 27,885.—ROBERT P. BOYCE, of Erata, Miss.—*Improved Currying and Leather Dressing Machine*.—Patent dated April 17, 1860.—This invention consists in the employment of a rotating cylinder, pressure roller, and a reciprocating frame provided with a currying knife, polishing stone, and blacking brush, combined and arranged to effect the desired end.

Claim.—The rotating cylinder A and pressure roller P , or its equivalent, in connection with the reciprocating frame K , provided with the currying knife M , stone N , and brush O , arranged for joint operation as and for the purpose set forth.

No. 27,886.—THOMAS F. CARD, of Cincinnati, Ohio.—*Improvement in Fire Places*.—Patent dated April 17, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the centre plate c , side plates $c^1 c^2$, slots e , pins f , supporting rods b , and pins, hooks, or staples a and d , the whole being constructed and combined in the manner set forth, to form a movable and adjustable deflecting plate, adapted to be applied at any height to a fire place of any dimensions.

No. 27,887.—JAMES M. CLARK, of Philadelphia, Pa.—*Improvement in the Bleaching of Grain by Sulphuric Acid*.—Patent dated April 17, 1860.—In the machinery described by the inventor for bleaching grain, A is a screen mounted upon suitable bearings, so that it may be revolved within the casing B . The bearing is in the wall of the casing, and the bearing D is of peculiar construction, so as to admit the grain to the screen from the spout E .

Claim.—The bleaching of wheat and rye, by exposing the same to the action of sulphuric acid gas, substantially as set forth.

No. 27,888.—EDWIN S. COLLINS, of Aspen Wall, Va.—*Improvement in Tobacco Presses*.—Patent dated April 17, 1860.—This invention consists in arranging the several parts of the press together.

Claim.—The arrangement of the lever F , the adjustable sword L , the arm R , and the cords $J K$, with the wheels $G H I$, and the sliding journal box O , when the same are connected together, operated, and used, substantially as and for the purpose specified.

No. 27,889.—HEZEKIAH CONANT, of Willimantic, Conn.—*Improvement in Looms*.—Patent dated April 17, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of a whip roll of a loom with a belt guide, so that a belt may be shifted and the relative speed of a pair of cone pulleys may be made to differ as and whenever said roll is depressed, as set forth.

No. 27,890.—GEORGE COOMBS, of West Falls, N. Y.—*Improved Mangle*.—Patent dated April 17, 1860.—This invention relates to the construction and arrangement of the several

parts of the mangle, so that a heavily weighted box can easily be moved back and forth upon rollers over the clothes to be smoothed.

Claim.—The combination and arrangement of the weighted box *c*, windlass *F*, smoothing table *B*, and rollers *G*, with the frame *A*, for the purposes and substantially as described.

No. 27,891.—LOUIS DASER, of Washington, D. C.—*Improved Sextant*.—Patent dated April 17, 1860.—This improvement consists in a device by which a series of observations may be taken without removing the eye from the telescope; also, in an appliance employed in taking equal altitudes, to indicate the portion of the tangent screw previously used.

The inventor says: I *claim*, first, the combination of a spring click and micrometer wheel with the tangent screw of a sextant, substantially as and for the purpose set forth.

Second. The combination, with the tangent screw of a sextant, of the stop nut *I*, for the purpose explained.

No. 27,892.—THOMAS B. DE FOREST, of New York, N. Y., assignor to himself and WALLACE & SONS, of Ansonia, Conn.—*Improvement in Lanterns*.—Patent dated April 17, 1860.—This invention consists in a method of securing to the lamp of a lantern the springs that serve to hold said lamp in place in the lantern, and is designed to avoid the use of solder for the same purpose and also of rivets.

Claim.—The combination of the fastening springs *S* and the encircling band *B* with the lamp of a lantern, when said lamp and encircling band, or either of them, have depressions, or their equivalents, formed in their surfaces, substantially as described and for the purposes specified.

No. 27,893.—DAVID DONALDS, of New York, N. Y.—*Improved Machine for Cutting Veneers*.—Patent dated April 17, 1860.—This invention consists in combining a laterally sliding knife stock with a toothed segmental arm and a sliding rack on trunnions, in such a manner that the centre of the knife coincides with the centre of the trunnions, and that the inclination of the knife can be adjusted at any moment, as well when the same is in operation as when it is at rest. It also consists in arranging a reciprocating log carrier attached to vibrating arms in combination with laterally adjustable guide grooves, in such a manner that a curvilinear motion is imparted to the log carrier, which motion can be adjusted according to the nature of the stuff by means of the guide grooves.

The inventor says: I *claim*, first, combining with a laterally sliding knife stock *C* a toothed segmental arm *I* and a toothed sliding rack *J*, substantially in the manner and for the purpose described.

Second. The arrangement of laterally adjustable guide grooves *i*, and vibrating arms *S*, in combination with the reciprocating log carrier *L*, constructed and operating substantially as and for the purpose set forth.

No. 27,894.—STEPHEN PAYNE DUNHAM and AUSTIN HIPPLE, of Kilbourne, Ohio.—*Improved Churn*.—Patent dated April 17, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the nollows *c* of the side pieces of the outer dasher, with the webs *a*, attached to the inner wall of the vessel *A*¹, together with the combinations of the hollows *a* of the side pieces of the inner dasher, with the webs *b* attached to the side pieces of the outer dasher, when these combinations are made and arranged, as and for the purposes specified.

No. 27,895.—LOVETT EAMES, of Kalamazoo, Mich.—*Improved Mortising Machine*.—Patent dated April 17, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, giving a forward and reverse movement to the chisel and auger by cam *G*¹, when the same receives its motion from the main shaft *B*, and a drum *S*, through the medium of friction wheel *N*, on a counter shaft, having one end under the control of the operator, so that said wheel may be forcibly brought into contact with either the drum or shaft, by a rocking movement of the foot lever, at the option of the attendant, essentially as described and represented.

Second. I *claim* giving a simultaneous reciprocating movement to belt wheel *C*, to that of the auger and chisel stock *E D*, by means of the duplicate cam *G*², bar *L*, and yoke *h*, or their equivalents, for the purposes and substantially as set forth.

No. 27,896.—WILLIAM M. ELLIS and JONAS B. ELLIS, of Washington, D. C.—*Improvement in Casting Fire Plugs*.—Patent dated April 17, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Preventing the heat of the molten metal from injuring the brass or other metal, which is to form the lining or seat surface for the plug or valve, by the use of the block *d*, or its equivalent, as set forth.

No. 27,897.—JAMES R. ENDER, of Trenton, La.—*Improvement in Hats.*—Patent dated April 17, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A hat provided with a lining of lampblack, charcoal, or other equivalent non-conducting substance, as shown and described.

No. 27,898.—ISAAC P. FRINK, of Newark, N. J.—*Improved Reflector for Gas Lights.*—Patent dated April 17, 1860.—A shows the body of the reflector made of tinned sheet iron, lined on the inside with corrugated glass; a cover B is attached to the reflector at a certain distance over the opening *a*; the body of the reflector is provided with beads *b b*¹, near to its edges, and extending all round; the object of these beads is to catch those rays which would otherwise escape without any useful effect over the edges of the reflector.

Claim.—The arrangement of a rectangular pyramidal reflector A, with beads *b b*¹, near the upper and lower edges, in combination with a curved cover B and with a hinged adjustable section C, constructed and operating substantially in the manner and for the purpose specified.

No. 27,899.—F. F. FOWLER, of Crane Township, Ohio.—*Improvement in Elevators for Hay, &c.*—Patent dated April 17, 1860.—This invention has for its object elevating hay on the stack in forming the stack, and consists in having a platform which may be placed on wheels, or runners, if desired to convey it from place to place.

Claim.—The revolving cross bar D, constructed as described, with its adjustable arms *a*, and pulleys P, in combination with shaft S, platform A, fork F, ropes *c* and *c*¹, and pulley P¹, operating substantially as and for the purpose set forth.

No. 27,900.—THEODORE GRUNDMANN, of Freeport, Ill.—*Improvement in Machines for Crushing Sugar Cane.*—Patent dated April 17, 1860.—This invention consists in the employment of a large central cylinder, in connection with a series of pressure cylinders, for the purpose of crushing cane.

Claim.—The arrangement and combination for the purpose specified of the drum or cylinder D, pressure rollers E, provided with the feed and discharge spouts G H, and the receiver I, substantially as set forth.

No. 27,901.—MARTIN HALLENBECK, of Albany, N. Y.—*Improvement in Harvesting Machines.*—Patent dated April 17, 1860.—This invention consists of a bent, or crank shaped axle, arranged to vibrate so as to release and connect the gearing that operates the cutting apparatus.

The inventor says: I *claim* the arrangement of the bent or crank shaped axle C¹, to vibrate substantially as described, to release and connect the gearing, as described.

I claim the construction and arrangement of the tongue and main frame, in combination with the shank of the finger bar, hinged to the finger bar and main frame, in the manner and for the purpose specified.

No. 27,902.—JAMES HARE, JR., of Paterson, N. J.—*Improved Oil Cock.*—Patent dated April 17, 1860.—The plug A passes through globe B, and is fitted into the two seats *a* and *b*, one above and the other below the globe. Secured to the upper part of the plug is the cup C and handle D; an annular passage *c* leads from a cup to a recess *c*¹ in the seat *a*, so that, by turning the plug the opening of the passage *c* is brought opposite to the recess *c*¹, the oil from the cup C is allowed to enter into the globe B.

Claim.—The arrangement of the nut D¹, in combination with the movable plug A, and with the stationary globe B, constructed and operating substantially as and for the purpose specified.

No. 27,903.—GEORGE W. L. HAZEN, of Indianapolis, Ind.—*Improvement in Sugar Mills.*—Patent dated April 17, 1860.—The hoops or bands E hold the frame H and I, the heads G fitting firmly in the grooves J. The bands E are driven upon the swell, or enlarged part of the frame, which causes the heads to be firmly held in the same manner that the staves hold the heads of a barrel by the tightening of the hoops.

Claim.—The frame H I and G, when constructed and held in place by the hoops or bands E E, or their equivalents, substantially in the manner and for the purposes set forth.

No. 27,904.—L. HERMANCÉ, of Saratoga Springs, N. Y.—*Improved Beer Pitcher.*—Patent dated April 17, 1860.—This invention consists in arranging at the base of the spout of the

pitcher a valve, which is acted upon by a spring to keep it down tight when not in immediate use, for the purpose of preventing the contents from becoming "flat" or "dead," after long standing in the pitcher.

Claim.—The combination of valves C D, with a pitcher, when arranged in the manner and for the purpose described.

No. 27,905.—CORNELIUS HOOD, of Seneca Falls, N. Y.—*Improvement in Pumps.*—Patent dated April 17, 1860.—The following is the operation of this invention: As the plunger H rises it forces up all the water in the annular chamber above it, while the chamber below fills through the openings $f^1 f^1$ in the bottom. The inner cylinder G and interior of the plunger tube are filled through the valve b from the vacuum formed within them, the valve g being kept closed meanwhile by the pressure of water above it. As the plunger descends, the ring valve d rises and permits the water to pass from the lower to the upper portion of the outer cylinder, while the water in the interior cylinder and within the plunger tube is forced to rise through the valve g by the closing of the lower valve b .

Claim.—The arrangement and combination of the hollow piston H with the internal short cylinder G and external cylinder D, valves $g b$, and annular valve d , to form a continuous acting pump, substantially as and for the purposes set forth.

No. 27,906.—JAMES L. HOWARD, of Hartford, Conn.—*Improved Coupling Attachment for Cords, Ropes, &c.*—Patent dated April 17, 1860.—This invention consists in the use of a divided screw or corrugated or smooth conical tube, which embraces the end of the ropes, and also for attaching the same to any fixture.

Claim.—The employment of the tubes A, in combination with the rope or belt and the socket C, substantially as and for the purposes shown and described.

No. 27,907.—STEPHEN HUGHES, of Hamilton, Ohio.—*Improvement in Flour Separators.*—Patent dated April 17, 1860.—This improvement relates to a peculiarly formed helical beater, in connection with various devices for controlling and rendering more effective the feeding and separating operations.

The inventor says: I *claim*, first, the construction of the beater with shoulders E, and eccentric surfaces F, for the purposes set forth.

Second. The adjustable chute boards H, constructed and arranged, and operating in the manner and for the purposes set forth.

No. 27,908.—JAMES M. JAY and JOHN DANNER, of Canton, Ohio.—*Improved Egg Beater.*—Patent dated April 17, 1860.—This invention consists in combining with the egg beater, patented by J. M. JAY, February 7, 1860, a ventilating cap piece H, and an outer casing I.

Claim.—The combination of the beating device, represented by letters B C and D, in combination with the case I, substantially as and for the purposes set forth.

No. 27,909.—WILLIAM JEFFERS, of Pawtucket, R. I.—*Improvement in Pump Valves.*—Patent dated April 17, 1860.—As the stroke of the pump commences, the portion C of the valve opens first, but its opening is followed instantly by the opening of the portion B, and hence two passages are formed for the water, viz: The usual one between A and B, and another one between B and C, and by this means the pump is filled and discharged more freely, and is enabled to be worked with a less amount of power than when the ordinary valves are employed.

Claim.—The combination of the two valves B C with each other and with the seat A, and the hinges $a a$, as and for the purpose shown and described.

No. 27,910.—R. W. JENKS, JR., and F. A. STEERE, of Providence R. I.—*Improvement in Brakes for City Railroad Cars.*—Patent dated April 17, 1860.—This invention consists in the arrangement of an elliptic spring, in such a relation to the brakes that are made to operate upon a cylindrical drum wheel fixed to the axles, that by the combination of a clutch attachment and ratchet wheel the driver may apply the brakes at any moment to said drum, which will cause either axle of the car wheels to act against the spring and compress it, after which the spring will exert a powerful force to further retard the motion of the car by the friction of the brakes on the drum wheel alone.

The inventors say: We *claim*, the combination with spring G, working in a suitable slide box, of the pawl bar H, brake bar J, with its shoe K, the ratchet wheel D, and brake wheel E, and the sliding clutch arm M, with its pin g , passing through the shoe K, the whole arranged, operating, and operated by a lever N, substantially as and for the purposes set forth.

We further claim the lever c , arranged as set forth, and operated by the draft rod d , in conjunction with the brake bar J, for the purposes specified.

No. 27,911.—J. B. JONES, of Brooklyn, (E. D.,) New York.—*Improved Machine for Forming Vessels of Sheet Metal*.—Patent dated April 17, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the employment of a blank holder D, or its equivalent, arranged in such a relation to the die or counter die, and operated in conjunction therewith, that the blank of which the pan is to be formed will be held down on the counter die and prevented from crimping while the die is carrying the blank down, essentially in the manner and for the purpose set forth.

Second. I claim the clutch M, arranged and combined with the die screw shaft H, in combination with clutch plate G of shaft J¹ and gauge screws *e e e*, for the purpose of causing the die and die holder to descend together until the former comes in contact with the blank on the counter die, when the die will descend alone the required distance.

No. 27,912.—HENRY JOHNSON, of Washington, D. C.—*Improvement in Vapor Lamps*.—Patent dated April 17, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the pipe B, when used as a fluid pipe and generator or vaporizer, and also when used as a gas pipe, in connection with nib C, for the conveyance of fluid from the supply pipe for generating or vaporizing, and for conveyance of gas or vapor to the burner.

Second. The combination of two regulating set screws or keys G and F, operating substantially as set forth and for the purposes described.

No. 27,913.—BENJAMIN I. LANE, of South Framingham, Mass.—*Improvement in Shoemaker's Awls*.—Patent dated April 17, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the projection or shoulder *c*, nut *b*, and slotted screw cone *a*, substantially as described, whereby the projection of shoulder *c* is made to perform the function of driving the pegs, and also serve as a means to facilitate the screwing up of the nut, and consequently the securing of the awl to the handle, substantially as described.

No. 27,914.—DANIEL LEE, of Boston, Mass.—*Improved Steam Trap*.—Patent dated April 17, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* my improved steam trap expander, as made tubular or hollow, and with one or more lateral openings *e*.

I also claim my improved mode of arranging or combining the tubular expander with its valve and case, viz: by having the expander at or near one end of it fastened to and opening through one end of the case, while its other end is connected with the valve C.

I also claim making the valve C separate from the expander, and applying the two together by adjusting screws B C as described.

No. 27,915.—CHARLES L. LIERNUR, of Mobile, Ala.—*Improvement in Testing the Wear of Railway Rails and Wheels*.—Patent dated April 17, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A railroad car revolving by means of a centre shaft, and supported by 4, 8, or more wheels, the axles of all of which point towards said shaft, and running said car upon a circular track of railroad rails, for the purpose of submitting both rails and wheels to a test of actual usage, substantially as and for the reasons described.

No. 27,916.—LOOMIS MANN, of Ionia, Mich.—*Improved Machine for Making Eave Troughs*.—Patent dated April 17, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the wing or bed piece B, and clamping plate C, rigidly attached to roller H, forming a lever thereto, operating in combination with the movable bar D, in the manner and for the purposes set forth.

Second. I claim notching the edges of bar D and clamping plate C, where they cross the lap of the plates to admit of their being soldered from edge to edge whilst in the machine, substantially as specified.

No. 27,917.—T. H. McCULLOCH, of Peoria, Ill.—*Improvement in Grain Drying Machines*.—Patent dated April 17, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the tubes C, conical chamber D, and hollow plugged shaft B, placed within a rotating slightly inclined cylinder or shell A, and arranged to form steam or hot air passages *g E h* to heat the chamber D and tubes C, substantially as and for the purpose set forth.

I further claim the arrangement of the plate *i*, connecting two tubes C to form a water-lifting chamber *j*, and the tube *l*, to form a communication between said chamber *j* and the shaft B, as and for the purpose specified.

No. 27,918.—W. S. McEWEN and N. A. PATTERSON, of Kingston, Tenn.—*Improvement in Overshoes, and Boots and Shoes.*—Patent dated April 17, 1860.—The object of this invention is to promote a free circulation of air on the inside of shoes or overshoes for keeping up a circulation of the blood in the extremities by carrying off the perspiration from the feet.

Claim.—A tube C formed around the edge of the mouth of a shoe having a corrugated inside surface, the corrugations communicating with said tube, substantially as and for the purposes set forth.

No. 27,919.—J. H. McGEHEE, of Athens, Ala.—*Improvement in Grain Separators.*—Patent dated April 17, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, arranging a pivotted self-adjusting float or board across the lower end of the second sieve, so that the wheat, in passing off of said sieve, shall be evenly spread, before it enters the separating flue, and in case the feed be rapid, the escape shall be commensurate therewith, substantially as and for the purposes set forth.

Second. Bevelling the slats of the flue from their inner edge to within about one-third of their rear edge, and hanging them out of centre on pivots, substantially as and for the purposes set forth.

No. 27,920.—J. VAUGHAN MERRICK, of Philadelphia, Pa.—*Improvement in Steam Carriages.*—Patent dated April 17, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the use of a surface condenser immersed in water, when the water used for such surface condenser is cooled, or partially cooled, by the passage of currents of air, in the manner set forth.

Second. The combination of the boiler and engines with surface condenser and cooling apparatus, when constructed, arranged and operated substantially as described, for the purpose of propelling carriages by steam, substantially as set forth.

No. 27,921.—AZEL REYNOLDS, JR., of North Bridgewater, Mass.—*Improved Staging Supporter for Mechanics' Use.*—Patent dated April 17, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* so arranging the two sets of struts of the staging supporter, that one set may directly bear or sustain the sliding bracket while the other supports the post, as described.

I also claim arranging the two brackets and posts, and combining them together, substantially as represented in Fig. 4, and as described.

I also claim combining with each post an adjustable socket, carrying ear pieces or bearers for the reception of the struts, as described.

I also claim combining a lateral rest *b* with each bracket, the same being to support the bracket laterally against a wall or another such rest.

No. 27,922.—JAMES MONTGOMERY, of Baltimore, Md.—*Improvement in Steam Boilers.*—Patent dated April 17, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Combining with a boiler which has a series of horizontal flues or tubes, or a boiler of any form other than that specified in my above-mentioned letters patent, but which has the flue space or passage leading from the fire chamber to the tubes or flues at one end of the said chamber, a grate of the whole or nearly the whole length of the boiler, with one or more fire doors at each end, substantially as and for the purpose set forth.

No. 27,923.—JAMES MOORE and ARCHIBALD KELLY, of Pittsburgh, Pa.—*Improved Machine for Making Picket Fence.*—Patent dated April 17, 1860.—This invention consists in a mechanical arrangement of twistors, guides, carriage reels, and take up; the whole arranged for the purpose of forming a machine for making picket fence.

The inventors say: We *claim*, first, the arrangement of the wheels 31 and *u*, cam *m*, cam yoke *n*, operating and regulating stops *j*, section of wheel *q*, and wheels *r s* and *t*, in combination with the reels *v*, springs *w*, and twistors *l*, as described, and for the purposes set forth.

Second. The use of the carriage *b*, when used in combination with the twistors *l*, reels *v*, and cam wheel *A*, as described and set forth.

Third. The use of guides *H*, when used in connection with the carriages *b* and ways *11*, as described, and for the purpose set forth.

Fourth. The combination of the take up reel *B*, ratchet wheel *C*, ratchet pawl *D*, and frame *c*, when arranged, constructed and operated in the manner specified, for the purpose set forth.

No. 27,924.—PHILEMON A. MORLEY, of Brooklyn, N. Y.—*Improvement in Lanterns.*—Patent dated April 17, 1860.—The inventor says: I form the top of my lantern in one piece,

seen at S, and separate the lower sections or sides from each other, and from either the bottom or top, or from both at the same time by means of an adjustable joint or hinge.

Claim.—The arrangement of the sides $N N^1 N^2 N^3$, loops $a a^1 a^2 a^3$, and rods $b b b b$, in relation to the top and bottom of a lantern, in the manner and for the purpose specified, and shown in the accompanying drawings.

No. 27,925.—MILO PECK, of New Haven, Conn.—*Improvement in Atmospheric Hammers.* Patent dated April 17, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Interposing a wooden planking or other non-conducting material between the frame which supports the mechanism of a trip hammer, and the bedpiece which forms the common foundation of the frame and the anvil, substantially as described, for the purposes specified.

No. 27,926.—JONAS PERKINS, of Braintree, Mass., assignor to N. S. C. PERKINS, of Norwalk, Ohio.—*Improvement in the Driving Mechanism of Sewing Machines.*—Patent dated April 17, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The method, substantially as described, of communicating power to sewing machines by means of self-locking and unlocking clutches or wheels, arranged, the one to drive the other in one direction only, when said clutches are hung for independent and joint rotation on separate shaft or distinct axle bearings—the one of which is attached to a lifting or opening and closing portion of the machine, and the other disconnected therefrom, for the double purpose of preventing the machine from being improperly driven backwards, and to facilitate the exposure of the underworks; also whereby the machine, when driven by a band or belt, may be opened without unshipping the band.

No. 27,927.—JEHU MITCHELL, of Aleppo Township, Pa.—*Improved Churn.*—Patent dated April 17, 1860.—In front of the standard D one half of a vertical journal box is formed; the other half or cap G is hinged at one side in such a manner as to permit the ready removal of the shaft suspended and working therein, by unhooking and swinging open the cap of the box. H is a hook, and I a pin or eye attached to the standard and cap respectively for the purpose of keeping the latter closed. J is the dasher shaft extending nearly to the bottom of the tub, having upon it two collars K L, one beneath the pinion M, and resting on the top of the box, and the other just below the bottom of the cover to prevent the vertical motion of the dasher shaft, and also to prevent the cream from being thrown upon the journal bearing of the shaft J.

Claim.—The arrangement of the gearing E M, standard D, hinged cap G, vertical dasher J N, and collar L; the whole being constructed and combined in the manner and for the purposes before set forth.

No. 27,928.—E. B. REQUA, of Jersey City, N. J.—*Improvement in Horse Powers.*—Patent dated April 17, 1860.—This invention consists in a certain arrangement of chain wheels, cog wheels, and grooved rollers, in combination with one or more loose rims of a peculiar form, and with an endless apron running over a roller platform in such a manner that a horse travelling on said endless apron imparts a rotary motion to the rims, which, when applied to a railroad car, take the place of the driving wheels, or when intended to drive other machinery one of said rims takes the place of the driving pulley.

Claim.—The arrangement of the hollow rims I, in combination with the toothed rims H, cog wheels G, chains c, chain wheels E and E¹, and endless apron A, constructed and operating substantially as and for the purpose specified.

No. 27,929.—JOHN ROBINSON of Eli, of Sharptown, Md.—*Improvement in Seed Planters.* Patent dated April 17, 1860.—This invention consists in certain improvements in seed planters. On the front side of the cross bar g is located a clutch rod o, secured at one end to the face of said bar, so that its other end has a continual tendency to spring from it, while the other is connected with a wire s passing immediately beneath the right hand operator's handle G, and connected with a trigger or finger lever N.

Claim.—The combination of the clutch rod o and wires s with trigger N at the handle G, the whole arranged and operating in connection with the adjustable indicating wheel and dropping devices, substantially as described.

No. 27,930.—ROBERT E. ROGERS, of Philadelphia, Pa.—*Improvement in Steam Generators.* Patent dated April 17, 1860.

The inventor says: The boiler sheet I make of thin metal, because it is not intended that it shall bear or resist any pressure, but that the rings alone shall withstand it. To unite the edges or form the seams I either weld or braze them when copper is used, or employ small rivets, which are hammered flat and even with the boiler sheet. The metallic rings I construct of broad bar iron.

Claim.—Constructing steam generators or boilers of the rings, as set forth, either alone or in combination with the interior sheet, substantially as described.

No. 27,931.—HENRY S. ROOT and THOMAS LLOYD, of Muncy, Pa.—*Improvement in Straw Cutters.*—Patent dated April 17, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim* the combination of a vibrating box with a stationary knife, when the whole is arranged so as to cause the weight of the box and its contents to assist in producing the cut, as hereinbefore described.

We also claim the combination of the vibrating racks P and Q with the gears *o* and *p*, or their equivalents, substantially as hereinbefore described, for the purpose of feeding the material intermittently, as hereinbefore specified, for the purpose set forth.

No. 27,932.—JEFFERSON SHORT, of Leavenworth, Kansas.—*Improvement in Machines for Crushing Quartz.*—Patent dated April 17, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the application and combination and arrangement of a series of crushing wheels combined with balance wheels or dead weights, so arranged on endless track that motion will be uniform on said track, as described in Fig. 2 of drawing, by means of coupling the ends of shafts together, and revolving cylinder with boxes in which axis of shafts revolve at centre, one independent of the other.

And I further claim the invention of the double revolving cylinder, which revolves independent of upright shaft and driving wheel.

I do not claim the invention of the wheels, but the arrangement and combination of the same, as described in specification and drawings.

No. 27,933.—HORACE SMITH and DANIEL B. WESSON, of Springfield, Mass.—*Improvement in Filling Metallic Cartridges.*—Patent dated April 17, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A cartridge in which fulminate is contained in the hollow, annular, projecting base, substantially as described, without being previously inclosed in a hollow metallic ring.

No. 27,934.—WILLIAM STEINMETZ, of Philadelphia, Pa.—*Improvement in Eyelet Machines.* Patent dated April 17, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Giving a sharp, angled, pointed shape to the extremity of the shank *d* of the punch of my improved eyelet machine, when the said punch is otherwise of the shape represented in the accompanying drawings, and when it is used in connection with a perforated die plate, substantially in the manner and for the purpose set forth.

No. 27,935.—JOHN TANEY, of Austin, Texas.—*Improvement in Apparatus for Boring Artesian Wells.*—Patent dated April 17, 1860.—This invention consists in combining pump valves and pistons with a drill for boring artesian and other wells, in such a manner that the usual way of lifting the drill and letting it fall will also be the means to admit clean water to the drill, and pump up the water mixed with the products of the boring operation.

Claim.—Combining with the tubes B and E *i i*, which are provided with arms H H and H² and with dovetail grooves in their surfaces, valves U R and D, valve piston F² and solid piston F, in the manner and for the purposes specified.

No. 27,936.—WILLIAM THOMSON, of Detroit, Mich.—*Improved Forge Bellows.*—Patent dated April 17, 1860.—This invention consists in the employment of a cylinder having two compartments in each end, connecting with the interior of the cylinder by valvular openings, and with the outer air at one end, the forge at the other; said cylinder to be partially divided longitudinally by an air tight diaphragm and to be partially filled with water, so that by giving to the cylinder a vibrating or rocking motion air will alternately be drawn into the cylinder on each side of the diaphragm from one end and forced out at the other end.

Claim.—The arrangement in cylinder A of partitions F F¹, with their valves H H¹ and I I¹, and central partition J, when the same are combined and a blast of air is obtained, substantially in the manner and for the purpose described.

No. 27,937.—JAMES S. TRIPP, of Danby, N. Y.—*Improved Saw Filer.*—Patent dated April 17, 1860.

The inventor says: The mode of operating this saw filer is to make fast the saw in the jaws; then commence with the right hand tooth and file it; as soon as one tooth is done put

the click on it, and adjust the click and file by means of the set screw M, and regulate the depth of filing by the cam and gauge, and bevel of the teeth by the pin and holes.

Claim.—The specific device described for bevelling the tooth of the saw, namely: the angle I, the projections O O, and the pin K, attached and operated as described.

No. 27,938.—W. C. TURNBULL, of Baltimore, Md.—*Improvement in Compressed Air Engines.*—Patent dated April 17, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The application to compressed air engines of an expansion cut-off, which is operated by a positive motion, but the stroke of which is regulated automatically by the pressure of the air in the holder or reservoir, so as to admit a volume of air of a certain density directly to, and allow it to expand in, the cylinder, for each stroke of the piston, as is necessary to drive the engine at a certain speed, substantially in the manner described.

No. 27,939.—PETER L. WEIMER, of Lebanon, Pa.—*Improved Mode of Actuating Governor Valves of Steam Engines.*—Patent dated April 17, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the movable rockshaft I, operated in the manner set forth, by means of the levers F attached to the governor spindle D and sliding boxes H, as described and specified.

I also claim actuating the rockshaft I by means of an eccentric on the engine shaft, when used in combination with the sliding boxes H and levers F attached to the governor spindle D, as described and specified.

I also claim the rods O working through the plate P, with the jam nuts R, India rubber buffer S, and spiral spring U, with the adjusting jam nuts Q, in combination with the arm N on the valve rod L, for the purpose as herein more fully described and specified.

No. 27,940.—ISAAC P. WENDELL, of Philadelphia, Pa.—*Improvement in Journal Boxes.*—Patent dated April 17, 1860.—This invention relates to improvements in journal boxes, which are furnished at one or both ends with a chamber containing packing to prevent the lubricating material from escaping from the oil chamber of the box. It consists in the employment of a double washer, forming the packing, a wedge formed strap bolt, a follower, and a bent strip.

The inventor says: I *claim*, first, the double washer E, of leather or other suitable material, the wedge formed strap bolt G, and the follower H, the whole being arranged within the chamber D of a journal box, substantially in the manner and for the purpose set forth.

Second. The follower H, and the bent strip F, in combination with the packing E, and the strap bolt G, the whole being applied to the journal box in the manner and for the purpose specified.

No. 27,941.—GEORGE WESTINGHOUSE, of Schenectady, N. Y.—*Improvement in Grain Separators.*—Patent dated April 17, 1860.—This invention consists in the arrangement of two carriers or screens connected with the thresher, whereby the parts are adjusted or set in working motion.

Claim.—The combination of the carriers D and E, the carrier D resting on the inner end of carrier E, whether the carriers are suspended from the thresher frame or otherwise, operating as described, for the purpose set forth.

No. 27,942.—CHARLES K. WILLIAMS, of Haddonfield, N. J.—*Improved Washing Machine.*—Patent dated April 17, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement of the adjustable dividing board I with the levers J J, the board being so secured as to slide up and down between guides attached to the levers, substantially as and for the purpose set forth.

Second. The arrangement with the shaft D, of the springs *a a*, made to operate upon different sides of said shaft, and the weights *d d*, when the same are used as and for the purpose set forth.

No. 27,943.—HIRAM ABBOTT, of Wakeman, Ohio, assignor to himself and L. A. LYON, of said Wakeman.—*Improvement in Heading Bolts.*—Patent dated April 17, 1860.—This invention consists in the use of the T shaped die jaws for clamping the rod to be headed, and also in the construction and operation of the follower *a b* for forming the head on the rod.

Claim.—The adjustable jaws B, the header and follower *a b*, and the guides D, operating as described and for the purposes set forth.

No. 27,944.—WILLIAM W. ALLEN and JAMES MOLYNEUX, of Bordentown, N. J., assignor to themselves and JOHN L. McKNIGHT, of said Bordentown.—*Improvement in Sewing Ma-*

chines.—Patent dated April 17, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* a circle with teeth on its periphery to feed the cloth or material being sewed, when said circle is arranged to turn on a stationary ring through which the needle may be threaded, whether said circle is arranged above or below the cloth.

No. 27,945.—HENRY BELFIELD, of Philadelphia, Pa., assignor to himself and SAMUEL W. HOFFMAN, of said Philadelphia.—*Improvement in Pumps.*—Patent dated April 17, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The shaft D, its two cranks d and d^1 , in combination with the rods G and G^1 , and valved buckets I and I^1 , and their valves A and A^1 ; the whole of the parts being constructed and arranged as set forth, so that a simultaneous reciprocating motion, in contrary directions, may be imparted to the said buckets by the rotation of said shaft D, and so that the two barrels may be in a direct line with each other.

No. 27,946.—JAMES BLAKE, of East Pepperell, Mass., assignor to himself and HENRY BLAKE, of said East Pepperell.—*Improved Auger.*—Patent dated April 17, 1860.—This invention consists in forming on the end of the auger shank an enlarged cylindrical portion, having a suitable screw thread cut on it and a short spiral groove terminating in a radial cutting point on the end of the auger, and a conical screw point which serves to centre and start the auger, while the cutter on the end of the cylindrical screw portion serves to cut a hole corresponding in diameter to the enlargement; through this enlargement passes an adjustable cutter which immediately succeeds the screw on the enlargement, and forms a hole in size according to the distance the cutting is set from the axis of motion.

Claim.—The combination, with extensible cutter bar G, of the screw enlargement C, with or without the centre point D; the same being arranged as and for the purposes set forth.

No. 27,947.—JOSEPH W. BRIGGS, of Cleveland, Ohio, assignor to himself and JACOB W. JORALEMON, of said Cleveland.—*Improvement in Window Sash Supporters.*—Patent dated April 17, 1860.—This invention consists in the construction of a combined lock and sash balance, which in its application to the window frame is attended with but little expense and trouble.

Claim.—The combination, construction, and arrangement of the double acting spring bolt C, with the frame A, drum B, coiled spring F, leather strap R, and friction roller S, substantially as described, for the purposes set forth.

No. 27,948.—CHRISTOPHER G. CROSS, of Chicago, Ill., assignor to himself and G. H. BAILEY, of said Chicago.—*Improvement in Tension Apparatus for Sewing Machines.*—Patent dated April 17, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The employment, in combination with a friction apparatus for producing tension on the thread, of a lever D, through or in contact with which the thread passes, in such a manner that any tendency to irregularity in the friction is counteracted by the consequent irregularity of the draft of the thread upon the said lever, substantially as described.

No. 27,949.—LUZON C. ENGLISH, of Canton, N. Y., assignor to himself and GALUSHA M. ANGIER, of Washington, D. C.—*Improvement in Stump Extractors.*—Patent dated April 17, 1860.—This invention consists of a peculiar arrangement of the gears in connection with movable legs of a peculiar construction, and provided with adjustable rollers.

The inventor says: I *claim*, first, the described stump extractor, provided with two sets of gearing, consisting of shafts L M, with their spur wheels, cog wheels, and clutches; all arranged and operated, substantially as set forth, for the purposes described.

Second. I claim the use of the wheels S and U, in combination with the double gears above claimed, substantially as described, for the purposes specified.

Third. I claim the adjustable wheels E, in combination with the foot pieces D, substantially as described.

No. 27,950.—D. G. FLETCHER, of Racine, Wis., assignor to himself and JAMES YATES, of said Racine.—*Improvement in Heat Radiators.*—Patent dated April 17, 1860.—This invention is an improvement in radiators through which the smoke and heated air ascending from a furnace or ordinary stove, situated in the lower story of a building, is to be conducted for economizing fuel by abstracting the heat from the products of combustion in their upper passage and radiating it into the room.

Claim.—The arrangement and combination, as shown and described, of the perforated conical cylinder C, registers F G, air space E, within the drum A, for the purpose specified

No. 27,951.—E. F. M. FLETCHER, of Georgia Plains, Vt., assignor to himself and JAMES M. EDNEY, of New York, N. Y.—*Improvement in Wind Mills*.—Patent dated April 17, 1860. This invention consists in the employment of a deflecting cone placed over the gearings, and so arranged relatively to the wheel that it may serve as a vane and keep the former facing the wind, the cone serving the tripple purpose of vane cover to the gearing and deflector, to cause the wind to act in the most effective manner against the wind wheel.

Claim.—The employment or use of the cone L, applied to the revolving cap C, and placed relatively with the wind wheel H, and gearing E F, to operate as and for the purpose set forth.

No. 27,952.—JOSEPH KOEHLER, of New York, N. Y., assignor to himself and HEINRICH SOLTMAN, of said New York.—*Improved Head Gear for Stopping Runaway Horses*.—Patent dated April 17, 1860.—This invention consists in a means for blinding the horse by pulling on a check rein, so that by covering his eyes he will be unable to see and stop. Should the operation of the blinders not be sufficient to check the horse, an additional pull on the same check rein brings the compressing operation on each side of the nostrils and obstructs the admission of air and overpowers the animal.

Claim.—The combination of the blinders g, compression pads o, sliding rod n, and inclines with the check rein h m, and collar i, substantially as set forth.

No. 27,953.—GEORGE MUNGER, of New Haven, Conn., assignor to himself and E. P. DEAN, of said New Haven.—*Improved Machine for Polishing Wood*.—Patent dated April 17, 1860.—This invention consists in arranging in a suitable relation with a system of feeding pressure rollers, a number of rotary disks which are placed in a horizontal plane and have roughened surfaces suitable for smoothing work passed over or in contact with their faces.

Claim.—Combining with suitable rotating smoothing disks, adjustable or self-adjusting feed and pressure rollers, for the purposes, and essentially in the manner, set forth.

No. 27,954.—EDMUND W. TARBELL, of Boston, Mass., assignor to himself and EDWIN SIMONDS, of said Boston.—*Improved Steam Boiler*.—Patent dated April 17, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination and arrangement of the water and steam space a, the transverse water space b, and the series of bent connection tubes c c, the furnace d, the smoke or heat chamber e, and the connection tube or tubes f, the whole forming an upright boiler or steam generator.

No. 27,955.—JOSEPH P. WOOD, of Troy, Ohio, assignor to himself and A. JOHNSON, of Parkham, Ohio.—*Improved Coopers' Tool*.—Patent dated April 17, 1860.—This invention relates to the formation of a tool by means of which the circumference of a barrel head may be cut and bevelled to the proper size and thickness for the chime, so that by shaving away the superfluous wood upon the underside the head will be completed and ready for use.

Claim.—The described barrel head parer, consisting of the stock A, bit B, tooth C, slider E, and thumb screw F, when the several parts, or their equivalents, are constructed and arranged as specified, and operating in the manner and for the purpose set forth.

No. 27,956.—GEORGE C. AIKEN, of Nashua, N. H.—*Improvement in Cultivator Teeth*.—Patent dated April 24, 1860.—The lower part a of the socket piece E is hollowed out on the under side so as to fit on the shoulder B¹, while the part b rests on the plate B. The upper part e of the coulter A slides into a dovetailed groove on the underside of the plate B; the front part e¹ being widest, the coulter A is held firm and secure; the harder it is forced back the tighter it fits.

Claim.—The combination and arrangement of the socket E, shoulder B¹, and journal B², with the plate B, vertical coulter A, flanges or mould boards C C, and cutters D D, substantially as set forth.

No. 27,957.—DANIEL BARCLAY, of Chicago, Ill.—*Improvement in Show Case Doors*.—Patent dated April 24, 1860.—This invention consists in making a groove around the back part of a show case frame, wide enough to allow one door to pass another. Each door is supplied with a spring of sufficient power to keep it in its place when shut.

Claim.—The described construction of groove, spring, and box, the whole being arranged, combined, and operating in the manner and for the purpose specified.

No. 27,958.—JOHN BARNES, of Lima, N. Y.—*Improvement in Broadcast Seeding Machines*.—Patent dated April 24, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the method described of sowing broadcast, by combining with a wagon or draught vehicle, carrying a seed box or hopper, a seed circulating and distributing apparatus, constructed to carry or pass the seed from the hopper to and beyond

either side of the vehicle, along extended hollow arms or conduits perforated to distribute or let the seed drop as it is circulated, in a current or currents, along the hollow arms or conduits, and the circulation kept up by establishing a vent or return current for the surplus seed, substantially as specified.

Second. The combination and arrangement substantially as specified, for action outside of, but in concert with, a feeding reservoir or hopper, carried by a draught vehicle, of extended and perforated seed distributing arms, or conduits, made capable of projection laterally beyond either side of the hopper and vehicle, or track of the latter, and when not required to sow, of adjustment to within the width of the vehicle, or thereabouts, surplus seed return pipes or conduits, and a conveyor, or conveyors, operating to circulate the seed through the distributing arms and return pipes, and pass it for distribution outside of and beyond both sides of the vehicle simultaneously.

Third. The combination with the hopper, discharge valves or slides *c* of the valves or slides *b*, to the distributing arms, arranged to operate together and in unison, essentially as shown and described.

Fourth. The combination with the surplus seed pipes, or conduits, of a sieve or sieves, operating to sift the seed as it is returned from the distributing arms or conduits, essentially as set forth.

No. 27,959.—LOUIS D. BARRAUD, of New York, N. Y.—*Improved Paper Bag Cutter*.—Patent dated April 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—As an improved tool, or improved article of manufacture, a paper bag cutter, composed of a gauge table A, fixed angular knife B¹, angular hinged shear knife B, and otherwise constructed as shown and described.

No. 27,960.—LEVI A. BEARDSLEY, of South Edmeston, N. Y.—*Improved Bench Vise*.—Patent dated April 24, 1860.—The jaws A A are strongly pivoted to two arms B, which themselves are pivoted together at their lower ends at *a*; these parts are made of suitable metal, and work freely in their joints. D is a right and left screw shaft topped through each jaw, and having a suitable handle for turning the screw in opening or closing the jaws.

Claim.—The arrangement and combination of the pivoted jaws A, hinged arms B, guide bar E, recess *c*, right and left screw D, and ring *b*, as and for the purpose shown and described.

No. 27,961.—MARTIN A. BELL, of Rushford, N. Y.—*Improvement in the Method of Tanning*.—Patent dated April 24, 1860.—The claim explains the nature of this invention.

The inventor says: I *claim* combining lye with tannic acids, whereby I am enabled to prevent the tanning liquors from becoming decomposed or sour, am enabled to strengthen them without accumulating more than necessary, and can tan skins in shorter time and with less labor than by any other known process.

No. 27,962.—G. T. BENNETT, of Mount Olive, N. C.—*Improvement in Corn and Cotton Cultivators*.—Patent dated April 24, 1860.—This invention consists in the combination and arrangement of the different parts.

Claim.—The curved beam B as constructed, in combination with the straight beam A, side beam *c*, braces *d* and *e*, side and double turn ploughs F and G, and cotton scraper D, the whole being arranged in relation to each other substantially as and for the purpose set forth.

No. 27,963.—GOODWIN O. BISHOP, of Hannibal, Mo.—*Improvement in Truss Bridges*.—Patent dated April 24, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination of the shoe G, step U, and strap or stirrup H, for the purpose of connecting and securing the arch chord D to its bottom chord F, in the manner described.

Second. I claim the combination and arrangement of the chord F and arch chord D with the compound truss C, arranged as described, whereby the camber of the bridge may be adjusted at any and all points, and the counter braces sustained against the shock of a moving train or other heavy body passing over the bridge.

No. 27,964.—SYLVANUS F. BROOKS, of Weston, Mass.—*Improved Infants' Cradle*.—Patent dated April 24, 1860.—This invention consists in constructing and ornamenting the body and rockers of a cradle, so that it may be used by a simple change for a settee, combining with the same a suitable cushion which will serve as a bed when the article is used for a cradle.

Claim.—The combined settee and cradle, constructed in the manner set forth; as a new article of manufacture.

No. 27,965.—SYLVANUS F. BROOKS, of Weston, Mass.—*Improved Looking Glass or Mirror*.—Patent dated April 24, 1860.—This invention consists in combining with a looking glass and frame a draw, which is to be hung within said frame by weights or other equivalent substitute, in such a manner that the draw may be opened and remain in its open state by the weights alone.

Claim.—The described and represented combination of a toilet draw with a looking glass frame, as a new article of manufacture.

No. 27,966.—LYMAN BROWN, JAMES LELAND, and JOHN LELAND, of Worcester, Mass.—*Improvement in Car Axles*.—Patent dated April 24, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim*, first, the quill box or bearing *c c*, accomplishing the double purpose of connecting and securing the two parts of axle A and B, and making one of the two bearings as specified.

Second. We claim the recess I I, the bearings F and H, substantially as specified.

No. 27,967.—LEVI W. BUXTON, of Nashua, N. H.—*Improved Animal Trap*.—Patent dated April 24, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* arranging the spear frame D, and its operating springs E E, on rods C C, extended from the bait platform carrier A, in combination with arranging the tripping lever H and the holding bar G on the said posts, and so as to operate with respect to the bait platform and the brail of the frame D, substantially as described.

I also claim the arrangement of the series of points or lances *c c*, &c., with respect to the bait platform B, viz: so as to surround it on opposite sides as described.

No. 27,968.—JOHN CADWELL, of Cincinnati, Ohio.—*Improved Carpenters' Clamp*.—Patent dated April 24, 1860.—This invention consists in the employment of a windlass, rack and pinion, levers, stops, and an adjustable jaw, arranged and operating together for the purpose of clamping together and securely retaining the parts of doors, sashes, blinds, and other small frame work, while the same are bored and pinned together or keyed in place.

The inventor says: I *claim*, first, the adjustable jaw A, windlass C, pinion *g*, rack *h*, and levers *j*, arranged and operated in combination with stops *m*, substantially as described and for the purpose set forth.

Second. I claim the stop *n*, the swinging piece *p* and shifting bar *q*, arranged as described and acting in combination with the windlass C, substantially as and for purpose set forth.

No. 27,969.—MERVIN R. CHACE, of Fall River, Mass.—*Improvement in Casting Molasses Gates*.—Patent dated April 24, 1860.—The principal object of this invention is to cast the body of a molasses gate with its conduit, or eduction tube formed with an angular bend *a*; *b* being the valve seat plate usually applied to the said conduit.

Claim.—The arrangement of the two sliding cores or mandrels, the valve seat and bent conduit matrices.

No. 27,970.—ELIZUR E. CLARK, of New Haven, Conn.—*Improvement in Concrete Walls*.—Patent dated April 24, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, a hollow concrete wall, made as described, by scoring out a space between the inner and outer portions, and connecting the parts with isolated binders, as described, the combination of the isolated binders with the parts of the wall, as shown, forming the necessary connection, while at the same time it does not interfere with the circulation, but allows both lateral and vertical circulation, except so far as the former is obstructed by the flues which pass upward through the wall, the whole being constructed and operating substantially as set forth.

Second. The combination, with a concrete wall made in two parts, as described, of binders which are non-conductors of moisture, substantially as described, for the purpose set forth.

No. 27,971.—ALFRED DAMARIN and GEORGE C. BROWER, of New Orleans, La.—*Improvement in the Construction of Instruments for Lighting Gas*.—Patent dated April 24, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim*, first, the combination of the wax taper holder with the gas key.

Second. The bending of the taper holder, so as to light gas through the top of the gas globe.

Third. Placing a flame guard beyond the end of the taper pipe.

Fourth. Leaving an open space between the said guard and the end of the pipe, all substantially as described.

No. 27,972.—JOHN DECKELMANN and FREDERICK SPIESS, of New York, N. Y.—*Improved Fire Escape*.—Patent dated April 24, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim* the employment or use of a series of iron ladders C D E, arranged so as to fold together, all or a portion of them, and be extended as required, and also to swing out from the building, as and for the purpose set forth.

We also claim, in connection with the above, the folding balcony platforms *n*, for the purpose specified.

No. 27,973.—F. O. DEGENER, of New York, N. Y.—*Improvement in Printing Presses*.—Patent dated April 24, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination of a rotating ink-distributing table, with a rotating reciprocating type bed, for the purpose as described.

Second. I claim the combination of the described mechanism for giving the desired movement to a type bed hinged to a platen; the said mechanism consisting of the revolving shaft H passing through the pieces or piece F, which support and guide the platen; the pieces or piece F, the alternately rotating reciprocating shaft *f*, supporting the type bed, the vibrating supports L, or their equivalents, the connecting piece E, or its equivalent; the connecting pieces M being attached to the shaft *f* of the type bed at one end, and connected at the other end by pins or bolts, set eccentrically to the shaft H, to wheels, plates, or arms attached to the shaft H.

Third. I claim, in combination with a type bed constructed and operating as described, the eccentric P, for the purpose of adjusting and varying the linear position of the type bed and platen.

Fourth. I claim the described construction of the card arrangement, operating as and for the purpose as set forth.

Fifth. I claim, in combination with the described card gauge and gripper, making the end gauge entirely separate from the side gauge, and attaching the end gauge to the platen on the side opposite to the side gauge and gripper, for the purpose as described.

Sixth. I claim attaching the frisket or gripper frame to a rotating reciprocating type bed, or to arms projecting from such type bed, in such a manner that the said frisket or gripper frame shall be carried by, and moved with, said type bed; and holding said gripper frame in the desired position when the grippers are not in contact with the platen, and allowing the gripper frame to assume the requisite positions when the grippers are in contact with the platen, and causing them to gripe and hold the paper against the platen, by and through the tension of a spring or springs only; thus dispensing with cams or stops generally used for such purposes.

Seventh. I claim, in combination with a type bed and platen, constructed and operating as described, the eccentric pin, bolt, or shaft, for the purpose of suspending the taking of an impression.

Eighth. I claim suspending the operation of the card drop motion during the suspension of the impression.

Ninth. I claim the combination of the eccentric pin, bolt, or shaft with a card drop motion, for the purpose of suspending the operation of such card drop motion.

Tenth. I claim suspending the taking of an impression, and suspending the operation of the card drop motion, by and through one and the same means.

Eleventh. I claim the combination of a type bed, operating as described, with the stationary ink roller supporters.

No. 27,974.—DARWIN ELLIS and PHILANDER HYNE, of Waterbury, Conn.—*Improved Portable Match Case*.—Patent dated April 24, 1860.—This invention consists of a metallic case within which the matches are retained; by a revolving motion each match is presented to an opening in the case, and delivered therefrom by the operation of a cross slide.

Claim.—The combination of the slotted case *a*, revolving shaft *b*, having the wings 3 3, and the cross slide and delivering finger 6, substantially as set forth.

No. 27,975.—JOSEPH F. EYLAR, of Scott, Ohio.—*Improvement in Cultivators*.—Patent dated April 24, 1860.—The plough frames are adapted to be raised to clear the shares from the ground, and admit of the implement being moved freely around by the following device: chains or ropes *d* are attached to the frames at *f*, and after passing over pulley M, connect to pulleys N on shaft *o*. A crank P is formed in this shaft, through which, by the feet of the drawer, the shaft may be rotated, and the frames hoisted so as to clear the ploughs of the ground.

Claim.—The described arrangement of the ploughs E F, frames G, links H, chains I, standards K, levers L, chains or cords *d*, pulleys M N, and crank shaft O P, constructed and operating in the manner and for the purposes set forth.

No. 27,976.—HENRY W. FARMER, of Poultney, Vt.—*Improved Window Blind Slat Machine*.—Patent dated April 24, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the combination of the guide rods Q T U V W X adjusted on one side of the machine, and yielding or elastic on the other, constructed, arranged, and operating substantially as described, with the double sets of feed rollers *k k k k*, all situated in front of the first cutter head, for the purpose specified.

I also claim the adjustable cutter heads S S for perfecting the beaded edges of the shades, when arranged in combination with the guide rods Q T U V W X, and pressing block J, substantially as described, so as to receive the shades in proper position directly from the side dressing cutter heads, without intermediate manipulation or machinery, and to finish them with unerring accuracy in their continuous and direct course through the machine.

No. 27,977.—MYRON FOX, of Stanford, Conn.—*Improved Method of Insulating and Supporting Lightning Rods*.—Patent dated April 24, 1860.—This invention consists in making the insulator in two or more sections matched together around the rod or conductor, without disturbing any other insulator or supporter, and when in place, will mutually support each other in a proper position; and having, in combination with the above, a supporter or band, made in two or more parts, hinged together in such a manner as to allow of its being opened and placed around the insulator after the latter is placed upon the rod, and when screwed or otherwise fastened to the side of the building or other support, it binds together the insulator, and holds all firmly in place.

Claim.—The insulator formed in two or more sections D d E e matched together in combination with the hinged supporter A B C, or its equivalent, made to operate substantially as and for the purposes set forth.

No. 27,978.—SAMUEL M. FOX, of New York, N. Y.—*Improvement in Tracks for City Railroads*.—Patent dated April 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the grooved and flat rails for city railroads, combined with the cylindrical and flanged wheels for the cars, in the manner and for the purpose set forth.

No. 27,979.—HENRY GIFFARD, of Paris, France.—*Improved Feed Water Apparatus for Steam Boilers*.—Patent dated April 24, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the method of supplying vessels under pressure with any non-elastic fluid, by the direct action of steam or other gaseous fluid, also under pressure, when this fluid is brought in direct contact with and enters the aforesaid vessels along with the non-elastic fluid to which it has first given the necessary force to overcome the resistance, substantially as described.

Second. I claim the general construction, arrangement, and combination of apparatus for forcing water or other liquids, by the direct action of a jet or jets of steam, or other gaseous fluid, substantially as described.

No. 27,980.—ROBERT HAWKINS, of Bealsville, Penn.—*Improvement in Bee Hives*.—Patent dated April 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The trap I, when constructed with a stationary grating *f*, and removable glass window *g* at its back, and arranged on a bee hive as and for the purpose described.

No. 27,981.—A. HOEN, of Baltimore, Md.—*Composition for Etching Stone*.—Patent dated April 24, 1860.—The claim explains the nature of this invention.

Claim.—The employment, as a mordant for lithographic stones, of a composition of gum arabic or its equivalents, with citric acid or some other acid forming a combination insoluble in water with the lime of the stone, substantially in the manner specified, so as to produce what is termed the "lithokaustic" method of etching stone.

No. 27,982.—RICHARD HORN BROOK, of Cincinnati, Ohio.—*Improvement in Running Gear for Railroad Cars*.—Patent dated April 24, 1860.—This invention relates to an arrangement of supplementary wheels, with broad flangeless tires, and adapted, when occasion requires it, to temporarily relieve the ordinary gear from its support of the car either on one or both sides.

Claim.—The supplementary axles C, and eccentric wheels D, arranged and combined with the running gear of a railroad car, substantially as and for the purpose set forth.

No. 27,983.—H. C. HUNT, of Ottumwa, Iowa.—*Improvement in Bench Planes*.—Patent dated April 24, 1860.—A protecting metallic strap *e*, whose turned up extremities are pivoted to the edges of the lower end of the front bit *a*, loosely embrace the lower end of the cutting

bit *b*, so that when the plane is shoved forward the strap *e* will swing freely upwards into a notch which is formed in the plane stock for its reception.

Claim.—Combining the metallic swinging strap *e* with the bits of said plane, substantially in the manner and for the purpose herein set forth.

No. 27,984.—JAMES IVES, of Mount Carmel, Conn.—*Improvement in Harness Pads.*—Patent dated April 24, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: First, in the construction of a harness pad detached from the tree or housing, I *claim* the combination, with the perforated plate *A*, of a U-shaped washer plate *B*, which has rivets or hooks formed on it, and is arranged within the pad and below the perforated pad plate, substantially as and for the purpose set forth.

Second. Confining the back band loop in position by combining it with a detachable *T* bolt *F* of the pad plate *A*, substantially as and for the purposes set forth.

Third. Closing up and confining one end of the pad by the combined agency of the back band loop *G* and the *T* bolt *F*, substantially as and for the purposes set forth.

Fourth. Providing the cap *G*¹ with a band or loop *f*, and with lugs *d d*, and using it in combination with a tree *E*, which has shoulders *e e* formed substantially in the manner and for the purpose described.

No. 27,985.—JAMES JENKINSON, of Brooklyn, N. Y.—*Improvement in Ventilators for Hats.*—Patent dated April 24, 1860.—This invention consists in arranging in the inner side of the crown of a hat a series of wings or fans, attached to spring arms, which emanate from a perforated hub in such a manner that motion is imparted to said wings by the motion of the person wearing the hat.

Claim.—The combination, with the crown of the hat, of a ventilator *V*, constructed and operating substantially in the manner and for the purpose specified.

No. 27,986.—WILLIAM D. JONES, of Dayton, Ohio.—*Improved Method of Adjusting the Planes in Moulding Machines.*—Patent dated April 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the shafts *A B* and *T* in their relation to each other and to the parts of the machine to which they are connected, the two first named shafts being susceptible of both vertical and lateral adjustment, as set forth.

No. 27,987.—L. B. JOYNER, of Hilliardston, N. C.—*Improvement in Cotton Thinning Ploughs.*—Patent dated April 24, 1860.—This invention consists in the arrangement of the shears, revolving cutters, frame, driving gear, and gear wheels.

Claim.—The arrangement of the shears *i h*, revolving cutters *g g*, frame *a*, driving wheel *b*, and gear wheel *d c*, substantially as and for the purpose set forth.

No. 27,988.—SELIGMAN KAKELES, of New York, N. Y.—*Improvement in Fluid Lenses.*—Patent dated April 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The application and use of a magnet, or its equivalent, in the bottom of a glass globe filled with a colored fluid, for the purpose as set forth.

No. 27,989.—A. KANE and N. KANE, of Newport, N. Y.—*Improvement in Harvesters.*—Patent dated April 24, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim* so combining a lever, that extends from the conductor's seat, with a ratchet and pawl, by means of a hinged arm *m*, or its equivalent, as that the driver or conductor, from his seat, may throw said pawl out of action with said ratchet, entirely, and when the machine is in motion or otherwise, and yet admit of said pawl slipping over the ratchet when in gear with it, and when the machine is backed, substantially as described.

We also claim, in combination with the shoe plate *P* and shoe *U*, the latter of which is secured to the finger bar and the former to the braces *Q* and *R*, the set screws *p p*, one on each side of the hinge joint, for the purpose of making a rigid connection between the finger bar and the shoe, when the machine is to be converted into a reaper, substantially as set forth.

We also claim making the track clearer of a harvesting machine in two sections, when the same are hinged together in such a manner that they act like a stiff track clearer when the machine is moved forward, but that the lower section may swing on the hinges and yield when the machine is backed, substantially in the manner described.

No. 27,990.—ISRAEL W. KNOX, of San Francisco, Cal.—*Improvement in Amalgamators.*—Patent dated April 24, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the grinder D, constructed and fitted within the pan B, to operate as and for the purpose set forth.

Second. The conical projection C provided with a discharge opening *a* and gate *b*, and having a central position within the pan B, to serve as a hub for the grinder D, substantially as shown and described.

Third. The employment or use of the frame J fitted within the pan B and covered with amalgamated plates, and used with or without the lining of amalgamated plates for the pan, substantially as and for the purpose set forth.

Fourth. The combination of the pan B with its conical projection C and gate *b*, the grinder D, and frame J, covered with the amalgamated plates, substantially as and for the purpose specified.

No. 27,991.—GEORGE KOCH and A. STOECKEL, of New York, N. Y.—*Improvement in Veneer Cutting Machines*.—Patent dated April 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The employment or use of the slotted bar I, being directly in front of the knife in the way, substantially as shown, so as to perform the double function of a weight for the bolt and a hot water conductor.

No. 27,992.—ADOLPHUS LIPPMAN, of New York, N. Y.—*Improved Fire Escape*.—Patent dated April 24, 1860.—This invention consists in arranging in the centre of an extension ladder, a covered passage in such a manner that persons from a building which may be on fire can be assisted to and can pass down through said passage; and also in combining with said passage a platform on the top, and a sliding carriage, with a windlass, in such a manner that when the ladders are extended and the carriage is raised, the platform enables persons to step into the carriage from a window or any other place.

The inventor says: I *claim*, first, arranging in the centre of the extension ladders D D¹, a covered passage G, substantially as and for the purpose described.

Second. The combination, with the covered passage G, of the platform J, and the sliding carriage H, constructed and operating substantially as and for the purpose specified.

Third. The arrangement of the inclined posts or standards C, in combination with the frame F, of the ladders D, and with the windlass E, constructed and operating substantially in the manner and for the purpose set forth.

No. 27,993.—JOHN S. LLOYD, of Salem, N. J.—*Improvement in Buckets for Removing Coal, &c.*—Patent dated April 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The application and use of a slide on the bottoms of self-adjusting buckets, as well as its particular construction and arrangement in connection with the spring S, by means of which the bucket is made to open and close itself.

No. 27,994.—JOHN S. LLOYD, of Salem, N. J.—*Improvement in Machines for Hoisting Hay, &c.*—Patent dated April 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The construction, combination, and arrangement of the fork, bucket, cords, levers, pulleys, springs, and railway, the arms E E to the block D, and the mode of attaching and supporting the railway to the barn or frame, so as to allow the wheels B B, with the attached blocks and fork, or bucket, to pass freely along the whole length of the rail.

No. 27,995.—MICHAEL MASSEY, of Cleveland, Ohio.—*Improvement in the Construction of Candle Machines*.—Patent dated April 24, 1860.—This invention consists in providing the machine with split pipes, each half being dovetailed at the top and bottom ends into the inside edge of two inner frames that slide in grooves in the outer frame, each half pipe having flanges grooved and tenoned, so that when closed they form a perfect joint.

The inventor says: I *claim* the combination and operation of the several devices, namely: the split pipe P, the right and left screw S, the springs in the sliding frames A, the knife K, the receiving boards H, and the drum G, as described and operating, for the purpose set forth.

No. 27,996.—LEVI MATTHEWS, of Antrim, Ohio.—*Improvement in Pumps*.—Patent dated April 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The employment of a reciprocating cap board, disk, or vane, immersed in the water of the well and operating conjointly with the plunger, in combination with a stationary receiving valve, or valves, to the pump, arranged to face said cap board, or thereabouts, and so that the cap board plays to and fro said valve or valves, substantially in the manner and for the purposes specified.

No. 27,997.—GREGOR MENZEL, of Milwaukee, Wis.—*Improvement in Fire Proof Safes.*—Patent dated April 24, 1860.—This invention consists in the peculiar construction of fire and burglar proof safes. It is constructed in a cylindrical shape, with a convex top and bottom P, thus securing great strength, and by making the interior E to revolve upon a pivot L, bringing a smooth impenetrable surface of iron entirely across the outer opening with a visible inlet or seam.

The inventor says: I *claim*, first, the revolving book stand E, and the outer cylinder B, there being an air space X between the book stand and cylinder E, and between the two cylinders B and E, and the parts named, by being constructed and arranged as set forth.

Second. I claim the convex top and bottom P P, of the outer cylinder, in combination with the projections U thereon, for the purposes described.

No. 27,998.—WILLIAM HARRISON MCCOY, of Wheeling, and JOHN F. MUTH, of Grafton, Va.—*Improvement in Window Sashes.*—Patent dated April 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The employment, in combination with a sash formed of divided lights, or numerous panes, of separately detachable pane holding frames C C, constructed and applied to fit the sash, essentially as specified, for the purpose of retaining the glasses in their places and to admit of the easy and speedy separate removal thereof; also forming a readily transportable means for measuring or sizing the panes, substantially as shown and described.

No. 27,999.—JAMES S. MCCURDY, of Brooklyn, N. Y.—*Improvement in Stitch Made by a Sewing Machine.*—Patent dated April 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The stitch produced with a single thread, by passing two loops thereof successively through the same perforation in the fabric to be sewed, passing the second of such loops through the first one, and passing through the second one the first of two similar loops that are passed in the same manner through the next perforation, substantially as described and represented by the accompanying drawings.

No. 28,000.—MATTHEW C. McCULLERS, of Herndon, Ga.—*Improvement in Ploughs.*—Patent dated April 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the handles, beam, and brace, and their several connecting parts, so as to make a plough stock that will admit of the changes, or receive the ploughs or mould boards, as stated, and in the manner set forth.

No. 28,001.—SAMUEL MAXWELL, of Baltimore, Md.—*Improved Composition for Removing Gum from Machinery.*—Patent dated April 24, 1860.—The inventor says: The composition is as follows: For a cask of 30 gallons take 30 pounds of quick lime, 1 pound of calcined magnesia, 1 pound of flour of sulphur, 1 pound of powdered French chalk, $\frac{1}{4}$ pound of harts-horn, (carbonate of ammonia,) and $\frac{1}{2}$ pound of chloride of lime. Put these materials in a 30-gallon barrel and add about 15 gallons of water, let it stand about 24 hours, being well stirred during that time, then add 8 gallons of whale oil and seven gallons of melted tar or other fat; mix it well and it is ready for use.

Claim.—The composition of ingredients and the process of admixture thereof, substantially as set forth and for the purposes specified, of removing gummy matter from machinery, &c.

No. 28,002.—AARON H. MILLER, of La Porte, Ind.—*Improvement in the Construction of Rotary Evaporators.*—Patent dated April 24, 1860.—A is the evaporator, divided into compartments 1 and 2 by a strip a; in the centre of A is a vertical bearing, or journal box b, through which passes the spindle c: around this the evaporator revolves; d d d are rollers attached to the furnace and serve to lessen the friction caused by the moving of the evaporator; B and B¹ are faucets for drawing off the boiled juice from the compartments 1 and 2 of the evaporator; C is the heating apparatus; D the rake or stirrer.

Claim.—The rotary evaporator A, with the compartments 1 and 2, constructed and operating substantially as set forth.

No. 28,003.—JAMES MONTGOMERY, of Baltimore, Md.—*Improved Combined Salinometer and Water Gauge for Steam Boilers.*—Patent dated April 24, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, a hollow float F, having a hollow arm e, which communicates with the atmosphere, when said float and arm are so arranged that any water which may leak or insinuate itself into the float will automatically, or by its own gravity, flow out or discharge therefrom, substantially as set forth.

Second. The combination of window c, and indicating arm g, when so arranged that the

visible level of the water will act to show the height of the same, substantially as and for the purposes set forth.

Third. The hydrometer scale *h*, attached to the end of the indicating arm *g*, and arranged at the side of the window *c*, so that the amount of saturation of the water with salt or other mineral may be easily read without the aid of a meter, substantially as set forth.

Fourth. Making the axial box or bearing of the float arm with an alarm passage *m*, in combination with the providing of a similar passage in the flanch *e* of the hollow arm, when the joint between the hollow arm and its axial box is made tight by the internal pressure of the steam of the boiler, substantially as set forth.

No. 28,004.—JAMES MONTGOMERY, of Baltimore, Md.—*Improvement in Railroad Car Axles*.—Patent dated April 24, 1860.—The edges of the bar *A*, at the cylindrical parts, are parallel, so as to enable them to be brought flush with each other at these parts and held firmly together by steel thimbles or sleeves *B*, having corrugations on their inner peripheries and placed in proper positions on the cylindrical portions while in a heated state, and cooling and shrinking thereon so as to firmly hold said parts together.

The inventor says: I *claim*, first, a shaft, or axle, constructed substantially as described.

Second. In combination with the same a central brace, or braces *D*, movable journal *B*, and cast iron hub, constructed substantially as set forth.

Third. The openings *E* between the circumferences of the axle and the thimble journal *B*, and through the body of the metal composing the journal box, substantially as and for the purposes set forth.

No. 28,005.—C. P. MORTON, of Philadelphia, Pa.—*Improvement in Saw Mills*.—Patent dated April 24, 1860.—This invention consists in the general arrangement, in relation to each other and to the saw, of two sets of double tracks upon track rails in front and rear of the saw, and a friction roller to serve both as a support and centre of motion to the timber near the teeth of the saw.

Claim.—The arrangement of the trucks *A A*¹ and *A*² and *A*³, respectively with each other and with the track rails *C C* and rollers *h*, in relation to the saw *d*, as set forth, the same operating together in the manner and for the purpose described.

No. 28,006.—DAVID R. NELSON, of Jackson, Ohio.—*Improved Machine for Adding Numbers*.—Patent dated April 24, 1860.—This invention consists in a provision of finger keys numbered from 1 to 9 inclusive, each, when depressed, being made through a peculiar arrangement of mechanism to act upon and move forward the finger of a dial the exact number of units carried on the face of the key itself, so that when a column of figures has been added by depressing the keys corresponding to the figures of the column the amount may be read on the face of the dial.

Claim.—The combination of the keys *B*, adjustable brackets *g h*, hinged lever *F*, and pawl *G*, operating through ratchet wheel *D* on the index *c*, substantially in the manner and for the purpose explained.

No. 28,007.—SEPTIMUS NORRIS, of Philadelphia, Pa.—*Improvement in Guide Wheels for Locomotives*.—Patent dated April 24, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the application of two radial bars jointed to the frame of the guide wheels and working with four centres.

Second. I *claim* the compound curved block in connection with the roller, for supporting and guiding the wheels through curves, at the same time holding them rigid in a straight line of rail.

No. 28,008.—ELFANES M. NOYES, of Newark, N. J.—*Improvement in Combs*.—Patent dated April 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—As an improved article of manufacture, a comb which is provided with a back piece *Q*, in the manner described, the said back piece being made of a single piece of horn bent across the grain, so that the grain of the horn shall cross the back of the comb, substantially as set forth.

No. 28,009.—JAMES PEELER, of Tallahassee, Fla.—*Improvement in Seeding Ploughs*.—Patent dated April 24, 1860.—*A* is the beam of the plough, *C* and *D* two metallic bars, which are bolted to the beam at *a* and *d* at their upper ends; said bars cross each other, and are bolted together at *X*. The bar *D* is turned at its lower end and forms a land side; said bar not only serves as a land side, but also as a brace. The lower end of the bar *C* extends forward and is made tapering so that the blades may be secured upon it.

Claim.—The general arrangement of the bars *C* and *D*, as constructed, the catch *c*, blade

H, clevis L, beam A, upright K, handles I, hopper J, and wheels B and B¹, the whole being used for the purpose of forming a seeding plough, substantially as set forth.

No. 28,010.—WORDEN P. PENN, of Belleville, Ill.—*Improvement in Rakes for Harvesters*.—Patent dated April 24, 1860.—When the machine is in operation the rod D causes the lever F to vibrate upon a horizontal plane, while at the same time the eccentric groove causes it to vibrate upon a vertical plane, and the horizontal movement of the lever causes the rake B to move to and fro across the platform c¹, and the vertical movement of the lever causes the shaft P to lift the rake off of the platform upon its backward motion, so as to clear the grain or straw that it may not heap it up or push it off of the outside of the platform.

Claim.—The levers F and O rigidly connected together and loosely pivoted together at e, in combination with the crank H, connecting rod D, shaft P, and guide rods b b, grooved shoe I, and platform C, the whole constructed and arranged substantially as described.

No. 28,011.—GEORGE W. RAINS, of Newburgh, N. Y.—*Improved Feed Water Apparatus for Steam Boilers*.—Patent dated April 24, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, the combination of the cylinder A connected with the boiler, as described, the piston D having a hollow rod, the valve F having an attached rod passing through the piston and its hollow rod, the rotating disk I, furnished with a pin f and projecting ring, the griper G H, or its equivalent, and the rod L suspended from the piston rod; the whole applied in connection with the cock N in the suction pipe, or its equivalent, to operate substantially as described.

And in combination with the above specified apparatus, I claim the alarm cock V, applied in connection with the rod L, to operate substantially as set forth.

No. 28,012.—ROBERT RAMSDEN, of South Easton, Pa.—*Improvement in Pumps*.—Patent dated April 24, 1860.—This invention consists in constructing that class of pumps called "plunger pumps," in such a manner that they will discharge water either when the plunger or piston is raised up or pushed down, without using more valves than are required by that class of pumps which only discharge water on the down stroke of the plunger.

Claim.—The combination of the plunger E, constructed as described, with the chambers B and C, the stuffing boxes a a a a and d d d d, and the valves f and g, substantially in the manner described and for the purposes set forth.

No. 28,013.—GEORGE RUGG, of Potsdam, N. Y.—*Improved Bullet Ladle*.—Patent dated April 24, 1860.—This invention consists in providing the bottom of the blade with an aperture, which aperture is to be closed by the end of the lever, and which aperture by means of the lever can be opened or closed at pleasure.

Claim.—The construction of the ladle with an aperture A, and the lever B to close the aperture at A, and to operate substantially as described.

No. 28,014.—WILLIAM B. SCAIFE, of Pittsburgh, Pa.—*Improved Metallic Cask*.—Patent dated April 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A cask, barrel, or keg made of sheet iron, having its sides corrugated longitudinally, in the manner described, to produce a bilge and leave the parts near the heads plain and united with the heads by lap joints which extend beyond the heads in the form of a chime, as described.

No. 28,015.—L. K. SELDEN, of Haddam, Conn.—*Improved Portable Swing*.—Patent dated April 24, 1860.—The object of this invention is to construct a cheap swing and standards for supporting it, with flexible base pieces for keeping the parts erect, in such a manner that the whole may be folded up in a compact compass when not in use.

Claim.—The combination of slotted base pieces A A, extension pointed rods C C and C¹ C¹, braces D D, with cross bar G, and elastic swinging bars b b¹, with basket J, all arranged substantially in the manner and for the purpose set forth.

No. 28,016.—IRULUS R. SMITH, of Elgin, Ill.—*Improvement in Cultivators*.—Patent dated April 24, 1860.—This invention consists in the arrangement of the parts. A represents four shovel ploughs, and A¹ one shovel plough in front. The shovel plough A¹ and the guard pieces E are made movable.

Claim.—The combination of the long standards A A¹, the check or guard pieces E, the movable handles N, the saddle P for the beam B to roll upon, the truss G, consisting of the pieces of iron S, the standards G G, the rod Y¹, the stretcher Y, the iron brace K, and the joint H, attached to the two wheeled carriage O, as described, and for the purpose specified.

No. 28,017.—WILLIAM SOMERVILLE, of New York, N. Y.—*Improved Device to Prevent Horses from Interfering*.—Patent dated April 24, 1860.—This invention consists in cementing a pad of India rubber or other similar substance into a recess made for the purpose in the hoof of the horse, and in a proper position to prevent contusions.

Claim.—Providing the foot of a horse with a pad, inserted and attached substantially as described and for the purpose set forth.

No. 28,018.—OTIS W. STANFORD, of Cincinnati, Ohio.—*Improvement in Horse Powers*.—Patent dated April 24, 1860.—This invention is an arrangement of mechanism for enabling a horse power employing a cogged driving wheel, axle beam, and a separate tumbling or pinion shaft, receiving motion from the periphery of said driving wheel, to operate with ease and effect upon uneven ground.

Claim.—The combination of the rotary platform C, axle beam D, cogged driving wheel E F, pinion shaft N P, hinge c, and slotted socket M m, constructed, arranged, and operated in the manner and for the purposes explained.

No. 28,019.—CALVIN STOWE, of Braceville, Ohio.—*Improvement in Corn Shock Binders*.—Patent dated April 24, 1860.—A represents the spindle or shaft, B the crank, C the sliding handle, D the rope, E the hook, *fff* knots on the rope.

Claim.—The sliding handle C, hook E, and knots *fff*, as described, for the purpose specified.

No. 28,020.—GEORGE C. TAFT, of Worcester, Mass.—*Improvement in Letter Copying Presses*.—Patent dated April 24, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* casting the platen D and tubular piece E in one piece and at a time, in combination with forming the screw *a* by coring, as and for the purposes set forth.

I also claim the combination of a single platen piece D E and screw *a* with screw F, arch piece C, shoulders *c d*, and socket *b*, all arranged and operating in relation to each other, as and for the purposes set forth.

No. 28,021.—GEORGE W. TOLHURST, of Liverpool, Ohio.—*Improved Washing Machine*.—Patent dated April 24, 1860.—This invention consists in providing the shaft of a semi-circular rubber with cords, chains, or wires, placed in a position inside the rubber so as to cause a side motion when said rubber is made to oscillate.

Claim.—The cords H H, in combination with the shaft D and rubber C, the whole being combined and arranged for the purposes set forth and specified.

No. 28,022.—RICHARD TEN EYCK, JR, of Brooklyn, N. Y.—*Improved Machine for Enamelling Mouldings*.—Patent dated April 24, 1860.—This invention consists in the use of reciprocating brushes, scrapers, pressure plates or hoods, (the latter being both stationary and movable,) and feed rollers.

The inventor says: I *claim* the employment or use of plates or hoods L N, in connection with scrapers M K, arranged to operate substantially as and for the purpose set forth.

I also claim, in combination with the scrapers M K and plates or hoods L N, the brushes J, for the purpose specified.

No. 28,023.—THOMAS P. TROTT, of Washington, D. C.—*Improved Labels for Mail Bags, &c.*—Patent dated April 24, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* a label plate, so fastened by one or both of its ends to a mail or other bag, package, or other thing, as that, whilst it is permanently attached thereto, it may nevertheless be turned thereon, substantially as described, when said plate is furnished with a shield, panel, or raised fillet, flange, or projection, as set forth.

And I claim, in combination with such a label plate that is permanently attached to the bag, package, or box, and is furnished with such a shield or panel, the attachable and removable labels, such as herein described and represented.

No. 28,024.—JAMES UNDERKOFER, of Philadelphia, Pa.—*Improvement in Hand Trucks*.—Patent dated April 24, 1860.—This invention consists in combining certain hooked rods and angular pieces with a truck, so that the whole may form a combined sack holder and truck for facilitating the removal of grain and other materials.

Claim.—Combining the movable hooked rods H, and the angular pieces G with the frame of the truck, substantially in the manner and for the purpose set forth.

No. 28,025.—AUGUSTUS C. VANDYKE, of Greensburg, Ky.—*Improved Apparatus for Heating Ore*.—Patent dated April 24, 1860.—This improvement consists in a peculiar arrangement of the heating grate, conical open work, valve and feed doors, in connection with the tunnel head of an iron furnace.

Claim.—Arrangement of the open work grate or basket E, conical open work grate F, rod G, lever H, and doors D and D¹, in connection with the tunnel head A, the whole being constructed, combined, and operated in the manner and for the purposes set forth.

No. 28,026.—JAMES A. VAUGHN, of Cuyahoga Falls, N. Y.—*Improvement in Grain Separators*.—Patent dated April 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Arranging the grain board T, screen U, and cockle board Z so as to incline in the direction of the length of the machine, while the series of zigzag screens and their boards incline towards the sides of the machine, as described, so that while the chaff is delivered at one end of the machine, the cockle and the screenings shall be delivered at the opposite end thereof, as described.

No. 28,027.—JOHN WAUGH, of Elmira, N. Y.—*Improved Machine for Cutting Sheet Metal*. Patent dated April 24, 1860.—In using this machine to cut circular plates or sheets, the clamp head is connected with the shears head by inserting its base rail *f* into the groove K; the sheet to be cut being adjusted between the clamp plates by the eye, or by the gauge rod *g*, and clamped by means of the screw *e*. The clamp head is then brought up properly to the shears, and fixed in this position by the lever *i*, or by the set screw *q*, or by both, and the sheet rotated against the shears with one hand, while the winch *q* is turned by the other.

The inventor says: I *claim*, first, the sheet head Fig. 2, composed of the table E, with its tongued rails *v*, and pieces 5, carrying the perforated lugs 6, the gauge rods *r*, the clamp 2, with its springs 4, and the gauge plate *t u*, when constructed and arranged as described.

Second. The combination of the rotary clamp head Fig. 3, and of the said sheet head connected with its carriage D, Fig. 1, severally with the groove K, and rotary shears head B, when they are arranged as described.

No. 28,028.—ROBERT T. WILDE, of New York, N. Y.—*Improvement in the Manufacture of Bonnet Frames*.—Patent dated April 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—In the construction of bonnet frames, the peculiar method of arranging and uniting the front head and stay wires, as set forth, by means of which the manufacture of bonnet frames is not only facilitated, but an uniformity in the stiffness and thickness of the front wire is thereby secured.

No. 28,029.—THOMAS WINDELL, of New Albany, Ia., assignor to himself and GEORGE R. CANNON, of the same place.—*Improvement in Tombstones*.—Patent dated April 24, 1860.—This invention consists in making tombstones and monuments of glass, in which inscriptions may be pressed.

Claim.—Manufacturing tombstones, or monuments of glass, in which inscriptions may be pressed, substantially as and for the purpose specified.

No. 28,030.—WILLIAM E. WORTHEN, of New York, N. Y.—*Improvement in Metallic Sash*. Patent dated April 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of metallic bars with bent pieces of sheet metal, constituting shoulders against which panes of glass may rest, and with sheet metal bases, when the whole are joined each to the other, substantially in the manner set forth, and constituting a metallic sash, substantially such as is described.

No. 28,031.—GEORGE H. WOOD, of Green Bay, Wis.—*Improvement in Machines for Crushing Stone*.—Patent dated April 24, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the solid shaft D D¹ *d*, on two axes meeting at a point below the roller E, and slightly separated from each other above said roller. I claim also the construction of the roller E, in the shape of two truncated cones, and the mode of combining, adjusting, and operating the same with the shaft D D¹ *d*.

I claim also the combination and arrangement of the shaft D D¹ *d*, and the crushing roller E, with the crushing box B, when used and operated, substantially as specified, for the purpose of crushing, without grinding, stone, quartz, or any other material which can be crushed or pulverized by pressure.

No. 28,032.—BENJAMIN H. WRIGHT, of Rome, N. Y.—*Improved Steam Boiler*.—Patent dated April 24, 1860.—This invention consists of a cylindrical shell *a a a* enclosing another cylinder *b b b*, between which is a water space; in the lower part of the hollow or cavity of the inner cylinder is to be fitted a suitable grate and ash pit. Proper charging apertures to be provided with suitable doors are to be cut through both cylinders and around the apertures, the inner and outer shells are to be connected so as to prevent the escape of water in any unusual or improper manner.

Claim.—The arrangement described for promoting the centripetal movement of the water, and the durability of the horizontal water tubes, by cutting off the direct communication between the steam chamber and end of the tubes nearest the feed pipe.

No. 28,033.—G. W. BLAKE, of Pepperell, Mass., assignor to himself and L. W. BLAKE, of said Pepperell.—*Improved Belt Fastening*.—Patent dated April 24, 1860.—This invention consists in the employment of two-eyed loops or links, which are passed through suitable slits cut at certain distances into the ends of the belt, in combination with rods which pass through the several eyes on both ends, and extending across the whole width of the belt, so as to fasten the two ends together without creating any elevation, or bulging out of the belt.

Claim.—The employment of two-eyed loops or links *B*, in combination with the rods *C*, substantially as and for the purpose described.

No. 28,034.—CHARLES BRANWHITE, of Williamsburgh, N. Y., assignor to CHARLES KNOX, of New York, N. Y.—*Improved Hat Rack for Cigars, &c.*—Patent dated April 24, 1860.—This invention consists in applying to the inside of a hat a rack for holding cigars, &c., constructed of reed, whalebone, or similar material, to which are applied strips of India rubber, attached to the hoops at suitable intervals by metal clasps, forming loops which, on account of their elastic properties, will receive and hold cigars, &c.

Claim.—The described cigar rack for hats, constructed and applied in the manner substantially as described.

No. 28,035.—W. I. CANTELO, of Philadelphia, Pa., assignor to STUART & PETERSON, of said Philadelphia.—*Improvement in Stoves*.—Patent dated April 24, 1860.—This invention consists of a box, or chamber, to which both air and gas are freely admitted, in combination with a cap, the latter having curved or inclined ridges provided with slits, so that the external air may have a free access to the lower part of the flame produced by the ignited gas as the latter passes through the slits.

Claim.—The combination of the chamber and cap, the latter having inclined or curved ridges provided with slits, in the manner and for the purpose specified.

No. 28,036.—THEODORE R. DUNHAM, of Newark, N. J., assignor to THOMAS B. PEDDIE and JOHN MORRISON, of said Newark.—*Improvement in Travelling Bags*.—Patent dated April 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A travelling bag having its interior provided with springs or elastic strips that are capable of being turned, as shown and described, so as to distend or not distend the sides of the bag as desired, all as set forth.

No. 28,037.—THOMAS GEORGE HAROLD, of Brooklyn, N. Y., assignor to himself and JAMES H. HAROLD, of said Brooklyn.—*Improved Needle Case*.—Patent dated April 24, 1860. The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, a needle case having a turning cover, or its equivalent, with an opening for the delivery of a needle, or needles, from one of the receptacles of said case, substantially as specified.

Second. And in combination with said case and turning cover, I claim the ratchet *e*, and indicating numbers around such case, for the purposes set forth.

No. 28,038.—HENRY A. JONES, of St. Louis, Mo., assignor to E. H. DEWEY, of said St. Louis.—*Improved Machine for Finishing Wooden Boxes*.—Patent dated April 24, 1860.—The object of this invention is to smooth off the surfaces of boxes, and cut off the projecting ends of the boards at the corners of the box, so that after it has passed through the machine for doing this it will be finished and ready for the market.

The inventor says: I *claim*, first, the endless travelling apron *B*, with clamping jaws *a a a a*, arranged and operating as set forth with relation to the rotary saw and cutter head *D D¹ E*, the whole operating in the manner and for the purpose specified.

Second. The adjustable guide plate *G*, carrying chamfering cutters *I c*, and smoothing cutter *H*, as shown and described.

Third. The bevelled chamfering cutters *g g*, arranged with relation to the travelling apron *B*, and guide plate *G*, as set forth and for the purpose described.

No. 28,039.—FREDERICK KAVEMANN, CHARLES KAVEMANN, and BANNERT HOERSTSMANN, of Cincinnati, Ohio.—*Improvement in Extension Ladders*.—Patent dated April 24, 1860.—F is a jack by which one section after another may be elevated, the claws *f* being applied to a round of the section to be raised, the jack resting upon the ground.

Claim.—The described combination of the disconnected jack *F f*, with the sliding and detachable sections 1, 2, 3, 4, 5, clips *A*, hooks *B*, stops *C*, brace *D*, and rack *E*, the whole being constructed and arranged and operated in the manner and for the purpose set forth.

No. 28,040.—FREDERICK C. MEYER, of Philadelphia, Pa., assignor to E. MEYER, of said Philadelphia.—*Machine for Copying Figures, &c.*—Patent dated April 24, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, forming on a block or plate of steel or other material a fac simile of a given pattern, by attaching both block and pattern to a movable table *I*, in the described position, in respect to a revolving drill *e* and stationary tracer *q*, imparting to the table a continuous pressure toward the drill or cutter by means of the weighted arm *M* and its roller *Q*, or their equivalents, and connecting the table to such a system of slides that it can be moved vertically and transversely as set forth.

Second. I claim so constructing the tracer *q* and so connecting it to the frame that it may be adjusted therein in respect to the point of the drill *e*, and in a line with the centre of the drill's rotation, as and for the purpose set forth.

Third. I claim the circular plates *K* and *K*¹, arranged to turn simultaneously on the table *I*, by operating the screw *J*, the whole being combined with the revolving cutter or drill *e*, the stationary tracer *q*, and the weighted arm *M*, or its equivalent, as and for the purpose specified.

Fourth. The anti-friction rollers *n* and *n*, when applied to the longitudinal and dovetailed projection *i* of the slide *H*, and the dovetailed recess of the table *I*, substantially in the manner and for the purpose set forth.

No. 28,041.—SAMUEL J. SEELY, of Buffalo, N. Y., assignor to CHARLES W. DURANT, of New York, N. Y.—*Improvement in Railroad Cars*.—Patent dated April 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The application, to the construction of the bodies of railroad cars and other vehicles, of metal plates, corrugated into a continued series of direct and reversed arches, and secured together by and upon the angle irons *a b c d*, and the trough irons *E*, as set forth, whereby a greater degree of strength in the vehicle to bear weight or resist pressure is secured than has ever before been attained with the same weight of material.

No. 28,042.—BRADFORD STETSON, of Uxbridge, Mass., assignor to himself and ELMER TOWNSEND, of Boston, Mass.—*Improvement in Skates*.—Patent dated April 24, 1860.—The object of this invention is to enable a skate to be expeditiously and securely fastened to the foot or boot.

The inventor says: I *claim* the application of the single windlass *C*, the worm gear *D*, and operating screw *F*, and shaft *E*, within the foot rest *B* of the skate, substantially in the manner, and so as to operate both fastening straps *G H* simultaneously, as specified.

And I particularly claim the application of each loop of the windlass or foot rest, but so that both parts or end portions of the loop may wind at one and the same time on the windlass while it may be in the act of being revolved.

No. 28,043.—J. H. WOODWARD, of Nashua, N. H., assignor to W. W. DUTCHER & Co., of Milford, Mass.—*Improvement in Temples*.—Patent dated April 24, 1860.—The object of this invention is to remove the curvature or bend of the cloth beyond the temple, and to cause the deflection to take place entirely within the temple, and is accomplished by closing the lower end of the trough of the roller, or extending a bar across it, and with its upper surface even with the upper or bearing edges of the trough.

Claim.—Making the temple trough with a closed inner end or bar or analogous contrivance, extending across the temple, and with respect to the inner end of the cylindrical roller and the upper edges of the sides of the trough, substantially in the manner and for the purpose set forth.

No. 28,044.—JAMES AIKEN, of Natchez, Miss.—*Improvement in Metal Ties for Cotton Bales*.—Patent dated May 1, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The formation of the bent plate with the holes to receive the hoop, and also the form of the rivet catches, as aforesaid, with the mode of fastening the hoop to the plate.

No. 28,045.—ENOS G. ALLEN, of Boston, Mass.—*Improvement in Steam Gauges*.—Patent dated May 1, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the use, in gauges for indicating the pressure of steam or other fluids, of a volute spring, the coils of which are of uniform width throughout, and which taper in the thickness only, in combination with the rubber disk or diaphragm as set forth.

Second. The thin, flexible metallic disk, interposed between the rubber diaphragm and the outer surface of the coils of the volute spring, for the purpose specified.

No. 28,046.—WILLIAM M. ARNALL, of Sperryville, Va.—*Improvement in Grain Separators and Cleaners*.—Patent dated May 1, 1860.—The nature of this invention consists in constructing and arranging the several parts of the machine.

Claim.—The combination of the distributing and equalizing cylinder I with the cylinders D and E, and with the brush F, when the same are used and arranged substantially in the manner and for the purpose described.

No. 28,047.—FREDERICK ASHLEY, of New York, N. Y.—*Improved Egg Beater*.—Patent dated May 1, 1860.—This invention consists of a shaft, having a screw thread formed upon its upper end, with a nut fitted to work thereon, and a series of beating or breaking wires upon its lower end.

Claim.—The combination of the beating or breaking wires B with the screw threaded shaft A and nut D, as and for the purpose set forth.

No. 28,048.—S. F. ATHERTON, of Fitchburg, Mass.—*Improved Machine for Splitting Hoops*.—Patent dated May 1, 1860.—This invention consists in an improved method of causing the feeding rolls to move equally upon each side of the splitting knife, as the hoop pole passes between them, for the purpose of keeping the knife constantly in the centre of the opening between the rolls.

The inventor says: I *claim* the wedge *h*, in combination with the levers *g*, operating as described for the purpose specified.

Second. I claim the vibrating knife *a*, operating in the manner specified, for the purpose described.

No. 28,049.—N. E. BADGLEY, of Gadsden, Ala.—*Improvement in Cotton Seed Planters*.—Patent dated May 1, 1860.—The operation of this machine is as follows: The hooks *c* draw the seed from the hopper, causing them to fall in the furrow. The teeth *T*¹ throw earth upon the seed, and the spring coverer completes the operation.

Claim.—The arrangement of the bent bifurcated hooks *c c*, slot *b* of hopper bottom, shafts *S* and *S*¹, opener *O*, teeth *T*¹, and spring covered *C*, substantially as before shown and described.

No. 28,050.—HENRY F. BAKER, of Centreville, Ind.—*Improvement in the Mode of Laying Drain Tile*.—Patent dated May 1, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The employment of the slides *D D*, constructed as described, the rear slide being provided with a shoulder *a*, when the same are used in connection with the mole *B*, for the purpose of drawing the tiles *E E* into the drain, substantially as specified.

No. 28,051.—WILLIAM C. BANKS, of Como Depot, Miss.—*Improvement in Corn Planters*.—Patent dated May 1, 1860.—This invention relates to the arrangement of the seeding wheel, the spring, and the seed cell adjusting device, when operating together.

Claim.—The arrangement of the seeding wheel *F* with its flanges *b*, spring cleaner *d*, and adjusting device *c*, connected together substantially in the manner and for the purpose described.

No. 28,052.—WILLIAM C. BANKS, of Como Depot, Miss.—*Improvement in Corn Planters*.—Patent dated May 1, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the gauge plate *m* for adjusting the size of the seed cell, when combined with the seed slide *a*, or its equivalent, and when constructed and operating in connection with the other parts of the machine, substantially in the manner and for the purpose described.

No. 28,053.—WILLIAM F. BEECHER, of Chicago, Ill.—*Improved Pipe Wrench*.—Patent dated May 1, 1860.—This invention is more specially designed for gas pipe, though it may be used for grasping, holding, or turning solid rods or tubes or cylinders.

The inventor says: I *claim*, first, the thumb or tongue *d*, having the recess *e*, with the edges *ff*, as set forth, and connected and arranged to the sliding block *g*, and with the spring, as described.

Second. The sliding block *g* having clutches to traverse the grooves and the set screw *i*, and arranged in relation to the other parts of the wrench, as shown and described.

No. 28,054.—DANA BICKFORD, of Westerly, R. I.—*Improved Embroidery Sewing Stand*.—Patent dated May 1, 1860.—This invention is a fancy article for ladies' use. A is the body made of cast metal; B is a clasp for holding the work for sewing, in the form of a sewing bird; C is a box for jewelry and other small articles; D is a cushion for pins and needles; E is a rack for spools; F F are adjustable arms fastened with a set screw for winding silk or other material; G is an emery ball.

Claim.—The arrangement of the work holder clasp B, with the heavy block A, and the box C, all substantially as and for the purpose specified.

No. 28,055.—HORACE BILLINGS, of Beardstown, Ill.—*Improved Cement*.—Patent dated May 1, 1860.—The claim explains the nature of this invention.

Claim.—A waterproof coating composition, whose peculiarity consists in its being mainly composed of rosin and pulverized steatite, incorporated with each other in about the proportions and in the manner set forth.

No. 28,056.—S. BOURNE, JR., of New York, N. Y.—*Improved Trunk Lock*.—Patent dated May 1, 1860.—This invention consists in the arrangement of two horizontal sliding spring bolts, in combination with a cam attached to a vertically swinging hasp in such a manner, that by turning down the hasp both bolts are forced out simultaneously, and as soon as the hasp is turned up, both bolts fly back spontaneously by the action of the springs attached to them, thus producing a secure fastening for trunks, &c.

Claim.—The arrangement of the horizontally sliding spring bolts A A, in combination with the vertically swinging hasp E, and cam F, constructed and operating substantially in the manner and for the purpose specified.

No. 28,057.—S. BOURNE, JR., and J. G. CUNNINGHAM, of New York, N. Y.—*Improvement in Locks for Travelling Bags*.—Patent dated May 1, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination with the plate A, casing B, and eyes a a^1 , of a long nose e and a short nose e^1 , when the said noses are attached to the extremities of a longitudinal bolt C, and so arranged to operate that the long nose first enters one of the eyes a , and then the short nose enters the other eye, as and for the purposes shown and described.

No. 28,058.—JAMES E. BOYLE, of Brooklyn, N. Y.—*Improved Vacuum Valve for Water Heating Apparatus*.—Patent dated May 1, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the application to close kitchen or house boilers of a cup leather valve, substantially as described, for the purpose set forth.

No. 28,059.—NOAH BOWLUS, of Middletown, Md.—*Improved Machine for Printing Addresses on Newspapers*.—Patent dated May 1, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the construction of an endless chain with type boxes c , said boxes having one or more spring sides e , substantially as and for the purposes set forth.

Second. The construction of a type box c , with one or more spring sides e , substantially as and for the purposes set forth.

Third. Arranging stationary catches d and f , in combination with the spring sides e of the endless chain of type boxes c , substantially as and for the purposes set forth.

Fourth. The combination of a paper-feeding and printing roller M, with the endless chain of type boxes c , substantially as and for the purposes set forth.

Fifth. The combination of a type feed box A, type wheel B, and shield b , substantially as and for the purposes set forth.

Sixth. Inking the types by means of a series of ink rollers I revolving round a common central shaft K, the roller being held in rigid or spring bearings I^1 , substantially as and for the purposes set forth.

Seventh. Causing type-inking rollers I, revolving round a common central shaft K, to travel in a straight line while in contact with the type, substantially as and for the purposes set forth.

Eighth. Combining a series of ink rollers I, arranged in spring bearings I^1 , with an ink roller H, arranged at a certain distance from the common central shaft K of said ink rollers, substantially as and for the purposes set forth.

Ninth. The combination of the washtub O and brush N, with an endless chain of type boxes c , substantially as and for the purposes set forth.

Tenth. The distributing ink roller G set in a vibrating frame, in combination with the main supply roller F, receiving ink roller H, and type-inking rollers I, substantially as and for the purposes set forth.

No. 28,060.—JOHN C. BRIGGS, of Woodbury, Conn.—*Improvement in Musical Reeds*.—Patent dated May 1, 1860.—This invention consists in certain improvements in the delivery apparatus.

The inventor says: I *claim* making the reed with the heel and toe twist, substantially as described.

I also claim making the reed plate with one or more wind indentations, or notches, against the raised edge of the reed, and with respect to the reed opening, as specified; and when they are arranged on opposite sides of the toe of the reed, one corner of the toe is elevated above the other corner, as described.

I claim making the notch, which is next to the elevated corner of less size than the other, for the purpose of equalizing, or approximately equalizing, the discharge of wind against opposite edges of the toe of the reed.

No. 28,061.—S. T. BRUCE, of Marshall, Mo.—*Improvement in Harvesters*.—Patent dated May 1, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the combination of the polygonally shaped tapering roll L, rotating immediately back of the cutting apparatus, with the obliquely set cylindrical roll M and guards G G¹, and H I and K, the whole arranged and operating as specified, for the purpose set forth.

No. 28,062.—COE S. BUCHANAN, of Ballston Spa, N. Y.—*Improvement in Boilers for Preparing Paper Stuff*.—Patent dated May 1, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination, with a rotary boiler or vessel, of a cylindrical strainer, arranged within said boiler or vessel, substantially in the manner and for the purposes specified.

Second. In rotary boilers or vessels, provided with cylindrical and concentric strainers, I claim the construction and arrangement of ribs in the form of gutters, substantially as described, and for the purposes set forth.

Third. I claim providing the hollow journals of boilers or vessels constructed to operate as described, by rotation with a tubular plug, capable of being shifted on its axis, such plug having one or more openings at the inner end so arranged as to allow of their coinciding with the channels or ways on the boiler heads, for the discharge from the boiler of liquid or steam, or of both liquid and steam, substantially as described, for the purposes specified.

No. 28,063.—M. V. B. BUELL, of Buffalo, N. Y.—*Improvement in Vapor Lamps*.—Patent dated May 1, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Having the burner E connected to the receiver or fount B, by a tube C, so that the top of the burner will extend above the highest level of the fluid in the receiver or fount B, for the purpose specified.

No. 28,064.—JAMES A. BYRD, of Jackson County, Fla.—*Improvement in Plough Stocks*.—Patent dated May 1, 1860.—The inventor says: I make the base or landside of a bar of iron, two inches wide, half an inch thick, and twelve inches long, shaped as shown at A; I make the stock B of two pieces of iron, one and a half inches wide, three eighths of an inch thick, and eighteen inches long, and bend them so as to form a square collar C for the wooden beam D to pass through; I then punch a square hole in one and a round hole in the other, a bolt E passing through these holes and the beam D makes them fast.

Claim.—The arrangement of the bars A and B B, collar C, bolts E and I, hook F, wedge H, and depressions G and K, as described, for the purposes set forth.

No. 28,065.—WILLIAM CHAMBERS, of Muscatine, Iowa.—*Improvement in Governor Valves for Steam Engines*.—Patent dated May 1, 1860.—This invention consists in arranging a disk valve, and rod between two pointed set screws and hinging the valve to its rod by means of a knuckle joint, in such a manner that the valve may be easily adjusted in relation to its seat so as to reduce the friction to a minimum, while there is a steam tight fit between the valve and its seat; also in combining the valve rod with a weighted lever and a spring catch, so that the flow of steam from the boiler to the steam chest shall be shut off whenever the engine attains an excessive speed, while the valve will admit a greater or less supply of steam at any decrease or increase of speed, respectively.

The inventor says: I *claim*, first, in the construction of a governor valve, of the character described, the combination of the knuckle joint *h* and pointed set screws G L, in the manner and for the purpose described.

Second. The combination and arrangement, with the governor valve D and its rod F, of a weighted lever I and spring catch K, the whole being constructed and operating in the manner and for the purpose described.

No. 28,066.—J. O. CONCH, of Middlefield, Conn.—*Improvement in Toy Cannon*.—Patent dated May 1, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, making the barrel, the axletree, axles, body, and trails of the cannon of a single casting, substantially as described.

Second. The attachment of the hammer to the axle tree or other part of the body of the carriage, substantially as specified.

Third. The spring G attached to the axle tree or other portion of the body of the carriage, and operating in combination with the downward extension of the hammer, both as a main and cocking spring, substantially as set forth.

No. 28,067.—GEORGE EATON, of Boston, Mass.—*Improvement in Rails for Street Railways*.—Patent dated May 1, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The improved double-bearing and grooved street rail, as made in two parts *g g*, bolted and arranged together, and with a gutter, water space, or conductor *i*, arranged between such parts and between their connections, as specified.

No. 28,068.—NELSON EDWARDS, of Chittenden County, Vt., and EDWARD G. DAY, of New York, N. Y.—*Improvement in Straw Cutters*.—Patent dated May 1, 1860.—By turning the crank B the blade is made to revolve, passing at every revolution the mouth of the compressor H, of which the engraving is an illustration, presenting its cutting edge so as to cut off an object thrust down through the compressor; I is a sectional view of the yielding self-adjusting jaw, between which and the rim of the compressor the edge of the blade is made to draw.

Claim.—The arrangement of the blade G, the springing guard I, and the compressor H, when the latter is made of tapering form, as described, for the purpose set forth.

No. 28,069.—SAMUEL T. FOWLER, of Brooklyn, N. Y.—*Improvement in the Construction of Concrete Walls*.—Patent dated May 1, 1860.—This invention consists in combining with a concrete wall a wooden framing, made by attaching horizontal ribs or stretchers to upright timbers, in such a manner that the wall shall entirely cover and protect the wood, while at the same time the wood shall bind the wall together.

Claim.—The combination, with a concrete wall, of the framing, composed of the timbers 1 and 2 arranged in the wall, substantially as described, for the purpose set forth.

No. 28,070.—CHARLES FRICKE, of Mobile, Ala.—*Improved Cement*.—Patent dated May 1, 1860.—This invention consists in mixing, in certain proportions, hydraulic cement, poz-zolona, coarse sand, tar, and tallow.

Claim.—The described water proof composition or mortar cement, for laying brick, stone, &c., compounded substantially as described.

No. 28,071.—PHILIP C. FRITZ, of Barrytown, N. Y.—*Improvement in Grain Cleaners*.—Patent dated May 1, 1860.—This invention consists in the combination of two garlic mashing rollers, having India rubber surfaces, with two garlic discharging brushes and a wheat exit spout, when said rollers completely overhang the mouth of the wheat exit spout and run with their surfaces sufficiently close together to mash the garlic and the brushes are situated in such relation to the broadest end of the exit spout that the mashed garlic adhering to the rubber surfaces of the rollers is discharged.

Claim.—The combination of the garlic mashing, India rubber surfaced rollers B b, garlic discharging brushes or doffers C C, and wheat exit spout Z, the whole being constructed and arranged and operating substantially as and for the purposes set forth.

No. 28,072.—A. M. GEORGE, of Nashua, N. H.—*Improvement in Mowing Machines*.—Patent dated May 1, 1860.—This invention consists in the arrangement of mechanism for throwing the cutter in and out of gear.

Claim.—The combination of the compound slide W and O with the guides X X, the stirrup and shipping levers K and G, spring J, and hook or stop H, arranged for operation in the manner and for the purpose specified.

No. 28,073.—LYMAN GIBSON, of Elmira, N. Y.—*Improvement in Water Wheels*.—Patent dated May 1, 1860.—This invention is to obtain a centre vent water wheel that will run without being retarded by dead water, and also one that will be simple in construction and acted upon both by the direct and reactive force of the water.

Claim.—The arrangement and combination of the case A having scrolls B, wheel D E having radial arms *d*, cylinder C having openings *a* and the angular-inclined buckets *f* attached at rim *e*, the whole being constructed and arranged for joint operation in the manner and for the purpose described.

No. 28,074.—JOSEPH H. GOODELL and ALFRED T. GOODELL, of New York, N. Y.—*Improved Method of Sharpening Cylindrical Cutting Knives*.—Patent dated May 1, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Attaching the carriage L to the vibrating bolt or bar or stock F of a veneer cutting machine, when said carriage is provided with a rotating grinding mill M and so arranged as to have a traversing or lateral movement on the bar or stock F and operate on the knife Q, as and for the purpose set forth.

No. 28,075.—JOHN GRAY, of Pittsburg, Pa.—*Improved Machine for Spinning Metallic Hollow Ware*.—Patent dated May 1, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the use, in machines for spinning out hollow ware from disks of metal, of a straight cylindrical mandrel revolving on its axis, of sufficient length to sustain the disk from the circumference to the point where the operation of the tool commences, in combination with a tool having a longitudinal motion parallel to the axis or face of the cylinder, and so arranged as to compress the disk between itself and the mandrel, substantially as described.

Also, the combination of the swinging clamp frame, having its centre of motion in the same vertical plane as the extremity of the mandrel, with the adjustable bar, or its equivalent, for setting the clamps which hold the disk at any required distance from the extremity of the mandrel, for the purpose of regulating at pleasure the diameter of the bottom of the kettle, or other article to be made, and at the same time permitting the side of the kettle, or other article, to lie close to the mandrel while the tool is passing over it, no matter what degree of "dish" is given to the disk.

No. 28,076.—N. F. GRISWOLD, of Meriden, Conn.—*Improved Ice Pitcher*.—Patent dated May 1, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A refrigerating pitcher having double walls and an ice chamber C communicating therewith, arranged in the manner substantially as set forth.

No. 28,077.—ALEXANDER HANVEY, of Steubenville, Ohio.—*Improvement in Wooden Soles for Boots and Shoes*.—Patent dated May 1, 1860.—This invention consists in uniting the sole by an India rubber joint just under the ball of the foot, so that flexibility and elasticity will be combined, at the same time that the joint can be made water proof. It also consists in the employment of an inner and thinner sole, which shall also be jointed but disconnected, and in giving the requisite strength to the sole at the joint by interposing a small piece of wood which will fit down closely on the India rubber over the joint of the outer sole and between and under the edges of the inner sole.

Claim.—Constructing wooden soles for boots or shoes, in the manner substantially as described and represented, and when the parts are united by India rubber, as set forth.

No. 28,078.—WILLIAM W. HARDING, of Philadelphia, Pa.—*Improved Perforating Rule for Printers*.—Patent dated May 1, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the bar A A, provided with a series of teeth, with the form, so that when the impression is taken these sharp points will perforate or deeply indent the paper, substantially as set forth.

No. 28,079.—JOHN D. HEATWOLE and R. C. MAUCK, of Harrisonburg, Va.—*Improvement in Hominy Mills*.—Patent dated May 1, 1860.—This invention consists in constructing the beaters with heads for the better performance of the operation, and in the introduction, between the cylinder and concave on the upper side, of a partition for preventing the free passage of the grain between that portion of the cylinder and concave, and thus ensure its passage between the beaters before it can make its exit from the machine.

Claim.—The combination of the partition P, with the two systems of headed beaters c and d, on cylinder and concave, constructed, arranged, and operating substantially as and for the purpose set forth.

No. 28,080.—ARTHUR HEMENWAY, of Cleveland, Ohio.—*Improvement in Machines for Bending Felloes*.—Patent dated May 1, 1860.—This invention relates to the combination of devices for bending felloes, by means of which broad pieces may be bent without danger of breaking, the same being confined at the ends by gripes, and protected upon the convex surface by an iron band while the bending power is applied.

Claim.—The combination of the gripe, Fig. 6, screw hooks N, and the adjusting plate T, provided with hooks M, when arranged in relation to the forming block, and acting conjointly in the manner and for the purpose set forth.

No. 28,081.—JOSEPH C. HENDERSON, of Albany, N. Y.—*Improvement in Cooking Stoves.*—Patent dated May 1, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the ash tube *t*, passing from the box *S* to the hearth *f*, through the oven or behind the front plate or doors, substantially as specified, whereby I am enabled to confine the ashes and prevent them entering either the oven or roaster placed on said hearth *f*, as set forth.

Second. I claim the arrangement of the openings *1 1*, into the oven on each side of the ash tube *t*, in the manner and for the purposes set forth.

Third. I claim admitting air to the fire from the space *3* by the opening *4*, between the lower end of the plate *p*, and the grate *r*, as and for the purposes specified.

No. 28,082.—A. HENRI, of Louisville, Ky.—*Improvement in Bonnets.*—Patent dated May 1, 1860.—This invention consists in putting together the four parts constituting the bonnet in such a manner that the same may be made to assume a flat state, and in that state be readily and compactly packed away, and when the bonnet is to be worn the parts so put together and furnished with trimmings that the required shape will be given to the bonnet.

Claim.—As a new article of manufacture the bonnet, constructed as described, for the purposes set forth:

No. 28,083.—SAMUEL HOYT, of Wilmington, Del.—*Improvement in Cementing Mill Stones.*—Patent dated May 1, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The use of lead, solder, or other similar molten metal, for the purpose of uniting the sections of a millstone and binding the same together at the eye and circumference, and at the same time giving increased weight to the stone, substantially in the manner described.

No. 28,084.—WILLIAM WHEELER HUBBELL, of Philadelphia, Pa.—*Improvement in Projectiles for Breech Loading Ordnance.*—Patent dated May 1, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination of the recess *x*, shoulders *v* and *w*, with the band *b*, and the wire coil *o*, secured in the band, as described.

Second. I claim the bevelled, cylindrical lead band *b*, in combination with the flutes *c c c*, and the wire coil *o*, in the recess *x*, so as to easily enter, compensate, and indent the band into the rifled bore, and give it great comparative strength to retain its proper form and position under this action, and with certainty rotate the shell or shot to the breech loading rifled gun.

Third. I claim the bevelled cylindrical canvas covering extending around and in front of the lead band, and secured by the groove and wire *u* to the body of the projectile, in combination with the flutes *c c c*, and the wire coil *o*, so that its bevelled front may easily enter and indent in the rifle bore without stripping, and the flutes allow the lead to compensate under it to the lands and grooves, and the wire strengthen and hold the lead firm that the canvas may be enabled to assume a form and firmness of bearing to coöperate with the lead band in rotating the projectile in the breech loading rifled cannon.

Fourth. I claim the firing holes *j j* in front of the striker, in combination with the striker and the magazine *m*, to facilitate the explosion in shells adapted to long ranged rifled cannon.

Fifth. I claim the circular ribs *y* and *z*, inside of and uniform around the axis of the shell, in combination with and at each end of the circular recess *x* and band *b*, so as to strengthen and support both the front and rear ends of the projectile and the base of the circular recess, resist the shock of discharge, the compression into the grooves and the shock of penetration, by restoring the strength lost in the application of the lead band.

No. 28,085.—THOMAS E. HUGHES, of Birmingham, Pa.—*Improved Shaving Cup.*—Patent dated May 1, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The shaving cup, as a new article of manufacture, consisting of a soap cup, mirror, and water receptacle, arranged and constructed as described and set forth.

No. 28,086.—ELISHA HUGHES, of McCartysville, Cal.—*Improved Writing Desk.*—Patent dated May 1, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A writing box, arranged as described, with paper rollers *E* and *F*, a blotting roller *D* at a table *C*, in combination with an inkstand *G* and with an almanac roller *H*, for the purpose specified.

No. 28,087.—E. F. JEWETT, of Plainville, Ohio.—*Improvement in Car Brakes.*—Patent dated May 1, 1860.—This invention consists in arranging the car body, the truck, and the brake shoes in such relation to each other that the superior momentum of the car body over that of the truck, when the train is checked, serves to operate the brakes; it also consists in

arranging slotted arms on rock shafts, which are actuated by a sliding motion imparted to the car body by its momentum, independent of the truck.

Claim.—The arrangement and combination of the slotted arms H, brake shoes F, rock shafts h, arms I, and standards J, or their equivalents, substantially as and for the purpose described.

No. 28,088.—J. F. KEELER, of Cleveland, Ohio.—*Improved Device for Adjusting Clocks Vertically.*—Patent dated May 1, 1860.—The claim and engravings explain the nature of this invention.

Claim.—In the construction of clocks, the use of the plumb line, the spirit level, or the index under the pendulum, either, or any of them, substantially in the manner and for the purpose set forth.

No. 28,089.—ERNST RUDOLPH KNORR, of Washington, D. C.—*Improved Method of Finding Courses and Bearings on Marine Charts.*—Patent dated May 1, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, putting the two movable compass cards together around a hollow cylinder of metal, or any other fit material, so as to allow their adjustment over any point on the charts of conic or orthographic, or Mercator's projection, and to show at once the true and compass bearings between any two points.

Second. I claim the ruler wire or string radiating from the centre, in combination with said compass cards, for the purposes set forth.

Third. I claim putting on both or either cards constituting my instrument, lines or marks, parallel or at right angles with the zero or any diameter, as means to adjust the instrument into the meridian of the chart, as well for the purpose to use both cards in connection as to use only one, detached from the other, in order to find only one of the relative bearings, either true or compass.

No. 28,090.—GEORGE LINDSAY, of Petersburg, Va.—*Improvement in Pumps.*—Patent dated May 1, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The pump barrel, in combination with the large piston or plunger B, the small piston C, and the hand wheel, or its equivalent, for connecting and disconnecting the pistons, the whole being constructed and operated in the manner and for the purpose set forth.

No. 28,091.—BENJAMIN LIVERMORE, of Hartford, Vt.—*Improvement in the Construction of Cement Drains.*—Patent dated May 1, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* covering or enveloping the cement aqueduct or water pipe, as it is being laid in the ditch or trench, with the flexible material d j, in the manner and for the purposes substantially as described, and set forth.

Also the attachment to the mould or former of the spindle f, for the purpose specified.

No. 28,092.—HENRY LOCKWOOD, of New York, N. Y.—*Improved Door Lock.*—Patent dated May 1, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the arrangement of a number of plugs or pieces, in combination with a revolving cylinder and a fixed frame, when said cylinder acts directly on the bolt while turning, in the manner and for the purpose as described.

I further claim the arrangement of the cap plate F, so constructed as to cover the key as soon as the same shall begin to turn the cylinder, substantially as set forth.

No. 28,093.—WILLIAM MANNHEIMER, of New York, N. Y.—*Improved Table Fork.*—Patent dated May 1, 1860.—This invention consists in providing a fork with a hollow handle, containing a spiral spring attached at one end and at the other an additional prong, by which pieces stuck on the points of the fork may be removed without the use of any additional instrument or the use of the hand.

Claim.—The combination of a hollow handle A with a spring B, knob C, and additional member or prong E, substantially as described, for the purpose aforesaid.

No. 28,094.—PATRICK McMAHON, of Scottsville, N. Y.—*Improved Machine for Filing Saws.*—Patent dated May 1, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination of the spring S with the stop joint n, in connection with the other parts of the file carrier, the whole operating in the manner and for the purpose substantially as set forth.

Second. I claim the combination of the index plate D and disk d with the shaft C, said shaft being composed of two sections, one cylindric and the other square, the square section

passing through the disk *d* and being carried round by it, the cylindric section passing through the index plate *D* and moving freely in it; the whole operating in the manner and for the purpose set forth.

No. 28,095.—FREDERICK SEYMOUR, of Cincinnati, Ohio.—*Improved Fire Escape*.—Patent dated May 1, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, my mode of forming ladder and shutter, having the blind, shutter, or ladder folding inside of the frame.

Second. I claim the mode of fastening the ladder and shutter to the window sill, as described.

Third. I claim the combination of the ladder and shutter, substantially as described, and for the purposes set forth.

No. 28,096.—WILLIAM S. MAYO, of New York, N. Y.—*Improvement in Water Backs for Ranges, &c.*—Patent dated May 1, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A water back with a compressible body or substance, of whatever form or material, which being placed inside the water back shall take off the pressure of freezing water, and prevent the water back from bursting when exposed to frost.

No. 28,097.—JAMES S. McCURDY, of Brooklyn, N. Y.—*Improvement in Sewing Machines*.—Patent dated May 1, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, so applying the feeding device, in combination with the needle of a sewing machine, and with a device operating in combination with the needle, to enchain the loops of a single thread carried by it through the fabric to be sewed, that the feed movement is imparted to the fabric only after every second withdrawal of the needle from the fabric, and a stitch is produced of the structure described.

Second. Combining the needle arm or needle operating lever with the main shaft, or with any rotating shaft, of a sewing machine, which carries the feeding cam by means of a rectangularly grooved plate *K*, sliding pins *d d*, and slide *N*, the whole applied and operating substantially as and for the purpose set forth.

No. 28,098.—H. A. MEARS, of Pecatonica, Ill.—*Improvement in Car Brakes*.—Patent dated May 1, 1860.—This invention consists in arranging a sliding frame with two friction wheels to act on the opposite side of a corresponding friction wheel secured to the axle of one pair of wheels, in such relation to the brakes, as well as the bumpers, that on slackening the speed of the engine the momentum of the cars causes the sliding frame to be pushed up against the friction wheel on the axle whereby the brakes are applied; and it also consists in arranging the friction wheels in the sliding frame in combination with ratchet wheels and pawls, in such a manner that an application of the brakes in the wrong direction is prevented.

The inventor says: I *claim*, first, the arrangement of the sliding frame *D*, with the friction wheels *d d*¹, in combination with the friction wheel *d*^{*}, chains *g*, and brakes *F F*¹ constructed and operating substantially in the manner and for the purpose set forth.

Second. The combination of the pawls *e*, and ratchet wheels *f f*¹, with the friction wheels *d d*¹ *d*^{*}, arranged in the manner and for the purpose set forth.

No. 28,099.—F. S. MERRITT, of New York, N. Y.—*Improvement in Cooking Ranges*.—Patent dated May 1, 1860.—The heated gasses or products of combustion from the fire place *A* pass down over the sides of the fire chamber and around the ovens *B* through the bottom gas chambers *C* and the side gas chambers *D* to the top gas chamber *E*, and from thence through the pipes *F* to the chimney.

The inventor says: I *claim*, first, the combination of the hollow faucet hinges *i*, with the water back *I*, back plate *b*, and supply pipes *h*, so that the water will be admitted to the back *I*, when the latter is turned towards the fire, and shut off when the back is swung away from the fire, as shown and described.

Second. The arrangement of the water back *I*, and fire brick *H*, to swing from opposite ends of the back plate *b*, substantially as shown, so that, when desired, both fire brick *H*, and water back *I*, may be swung aside, to allow the heat of the fire to act directly upon the air pipe *J*, as set forth.

Third. The arrangement of the fire place *A*, ovens *B*, gas chambers *C*, *D*, *E*, and air chamber *J*, as and for the purpose shown and described.

No. 28,100.—E. WILSON MILLS, of Amber, N. Y.—*Improvement in Wind Mills*.—Patent dated May 1, 1860.—*A* is a bed plate that is made to support the various parts of the mill; *B* is the arbor that supports the wheels and communicates the power of the wings to other machinery; *C* is the fan or vane; *D* is the hub that supports the arms *J*; it is secured to the

arbor. The front surface has a projection in the centre to which to attach a spring; the rear surface has a circular groove for a catch and spring, the arms J are inserted in its periphery.

Claim.—The general arrangement and combination of the several parts, viz: hub D, wheel E, spring L, and wheel G, with its stops N and P, and catch Q, spring M, rods H, and cords K, when constructed as specified, and used for the purpose set forth.

No. 28,101.—O. W. MINARD, of Waterbury, Conn.—*Improvement in Measuring Tapes.*—Patent dated May 1, 1860.—This invention consists in the use of a spring, a graduated plate, and an indicator, in combination with the measuring tape, to determine the tension necessary to be given to the tape.

Claim.—The employment, substantially as described, of the spring *a*, the pointer *b*, and the graduated plate *i*, in combination with the measuring tape, for the purpose specified

No. 28,102.—EDWARD MINGAY, of Boston, Mass.—*Improvement in Stove Grates.*—Patent dated May 1, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Improved arrangement of the shafts B and D, for effecting the rotary and tilting movements of the grate with each other, and in respect to the grate and its surrounding ring or part C, the shaft D, in such arrangement, being tubular and concentric with the shaft B, and the latter being carried through the former, and both made to project from one side of the ring C, in manner as described and represented, the grate being operated by a slotted crank connection, or its equivalent, applied to it and the tubular shaft D.

No. 28,103.—GEORGE W. MORRIS and WILLIAM QUANN, of Philadelphia, Pa.—*Improvement in Restoring Burnt Iron.*—Patent dated May 1, 1860.—The claim explains the nature of this invention.

Claim.—Refining burnt iron while melting in the cupola furnace, by mingling with it a manganesian iron ore, in the proper proportions, and melting the whole mass together in the furnace, as described.

No. 28,104.—WILLIAM T. NICHOLSON, of Providence, R. I.—*Improvement in Spirit Levels.*—Patent dated May 1, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The improvement in the article of manufacture described, consisting of the use of a protecting sheath, or its equivalent, in combination with the fluid tube of a mechanic's level, substantially as described.

No. 28,105.—JESSE R. PARK, of Marlboro', N. Y.—*Improved Basket.*—Patent dated May 1, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* constructing baskets by two laminæ of wood slit towards their ends and laid across each other, and interlaced with filling, so as to form a square box shape at the bottom and a round basket shape near the top, as set forth.

And, in combination therewith, I claim the metal and wood rim, constructed as shown, with the wood rim in the inside, so as not to injure the berries, as set forth.

No. 28,106.—AMOS SEAMAN, of Winnebago County, Ill.—*Improvement in Corn Planters.*—Patent dated May 1, 1860.—F is a hand lever, attached to the pole at g, and hinged with a hook and eye hinge. H is a foot lever, which draws a bolt at the fore end of the lever, setting the pole at liberty, to be shifted by the hand lever F for the purpose of guiding the machine when it becomes necessary to turn the team. I is a post, notched so as to hold the combined lever at the desired position. J is a crank lever, attached to the rotary post K, operated by protuberant knuckles on the wheel so as to drop the corn at the proper distances.

Claim.—The arrangement of the lever A, connecting rod B, iron straps C, plough beams D, axles E, foot lever H, post I, crank lever J, and axles O, operating as described, for the purposes set forth.

No. 28,107.—THADDEUS SELLECK, of Greenwich, Conn.—*Improved Method of Employing Franklinite Pig Metal for Making Grinding and Abrading Surfaces.*—Patent dated May 1, 1860.—The claim explains the nature of this invention.

Claim.—The method herein described of employing Franklinite pig metal as a grinding or abrading surface, as specified.

No. 28,108.—WILLIAM P. MARTIN, of Salem, Mass.—*Improvement in Machines for Finishing Leather.*—Patent dated May 1, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the employment of an adjustable and reversible plate *a*, in combination with a suitable spring, and arranged on the hand, substantially as and for the purposes specified.

I also claim the employment in the hand of a yielding tool *b*, so arranged in the hand as to be capable of yielding uniformly along its whole length, or unevenly as hereinbefore described for the purposes set forth.

I also claim the combination of two or more yielding tools *b c*, when their edges are each ground on a different angle, as hereinbefore specified, the whole arranged to operate as and for the purposes set forth.

I also claim the combination of the spring plate *a*, and yielding tools *b* and *c*, the whole arranged and operating as specified, for the purposes set forth.

I also claim arranging each glass in a separate case *i*, in such manner that while the case always remains in the same relative position with the other parts of the hand, the glass or tool may be set out, as and for the purpose set forth.

I also claim, in combination with the device for adjusting each end of the table separately, the bars *l* and *m*, or their equivalents, for raising the whole table simultaneously, as and for the purposes set forth.

I also claim the combination of the slotted pendant *Q*, pendulum bars *P P*, bent arms *o² o²* and the connecting rod *o*, with the fly wheel *M*, and fixed stud *Y*; the whole arranged to operate as and for the purposes specified.

No. 28,109.—BENJAMIN SINGLETON, of Portsmouth, Va.—*Improvement in Hammer Guards for Fire Arms*.—Patent dated May 1, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of an arched guard *A*, constructed and applied to a fire arm, substantially as described, and a hammer with a laterally projecting thumb piece *B*, working through one side of said guard, substantially as specified.

No. 28,110.—WALTER STEWART, of Natchez, Miss.—*Improvement in Iron Ties for Cotton Bales*.—Patent dated May 1, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The tie or mode of fastening iron hoops on bales of cotton or other compressed material, by means of a link or links and serrated or notched edges of the hoop, as represented in the accompanying drawings.

No. 28,111.—WILLIAM MONT STORM, of New York, N. Y.—*Improved Safety Valve for Steam Boilers*.—Patent dated May 1, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim the valve suspending the weight from and below itself and within the boiler, or a chamber opening to the same, together with an adjustable counterpoise on a lever outside; the valve also to rise independently of such lever, and to be covered by a bonnet or its equivalent; the whole being constructed, arranged, and operating substantially as described.

I also claim, in combination as above, the valve and its seat, at or near the zone of their contact, spherical, so that its pendant weight may slightly oscillate it, without causing escape of steam, while thus preventing it becoming fast in its seat.

No. 28,112.—JOHN STUBER, of Utica, N. Y.—*Improvement in Hot Air Furnaces*.—Patent dated May 1, 1860.—The fire being made in the furnace and the damper *G g* closed, the heat is forced up to the top of the longer extension of radiating surface *D D* through the pipes *C C*, from thence down the extension to the smoke pipe, and thence through the smoke pipe to the smaller extension of radiating surface *E E*.

Claim.—The independent attachment or heating apparatus designated by the letters *A a* and *B*, in Fig. 3, the pear-shaped pipes *C C*, and the bevel or tunnel-shaped extensions of radiating surface *D D E E*, in Fig. 2, as combined and arranged in the drawing accompanying my application, and described in this specification.

No. 28,113.—GEORGE W. THOMPSON, of New York, N. Y.—*Improvement in Gas Burners*.—Patent dated May 1, 1860.—This invention consists of a combination of a valve, an independent weight and a stop, the whole applied, arranged, and operating within a burner, to produce a uniform light.

Claim.—The regulator, composed of the valve *D*, an independent weight *E*, or its equivalent, and a stop *g* or *h*, the whole applied to a burner and operating substantially as described.

No. 28,114.—JAMES P. THORP, of Plantsville, Conn.—*Improved Wagon Shaft Shackle*.—Patent dated May 1, 1860.—This invention consists in the formation of a die for the purpose of turning up the ears, so as to form a joint.

Claim.—An improved article of manufacture, a wagon shaft shackle, constructed substantially in the manner as herein set forth and described.

No. 28,115.—THOMAS THORP, of New York, N. Y.—*Improved Machine for Making Cigars*.—Patent dated May 1, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, causing the belt E to run in a line oblique to the axis of the cigar, for the purpose of giving the latter a traversing motion towards the heading socket K, substantially as and for the purpose set forth.

Second. I claim the employment of the conical rollers D and D¹ and conical drums C and C¹, in combination with the inclination of the axis of either, for the purpose of causing the belt E to retain its oblique position, substantially as described.

Third. I claim the projecting ridges *c* and *c*¹ on the drums C and C¹, in combination with the grooves *d* and *d*¹ in the rollers D and D¹, for the purposes specified.

Fourth. I claim reversing the angle made by the axis of the cigar and the path of the belt E, substantially in the manner described, to enable one and the same machine to wind right and left hand leaves at pleasure.

No. 28,116.—G. H. TIMMERMAN, of St. Louis, Mo.—*Improvement in Governor Valves*.—Patent dated May 1, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, a double plunger balanced valve which has its plunger made tapering on the cylindrical seats of the same, made flaring at top, substantially as and for the purposes set forth.

Second. Combining a hand lever *m* with a sleeve *n* through which the valve rod *k* plays, and with a clamp screw *o*, by means of which the sleeve can be clamped to the valve rod, whenever it is desired, by detaching the governor by means of the screw nut *p*, to work the plunger valves by hand, substantially as and for the purposes set forth.

No. 28,117.—GRANT B. TURNER, of Cuyahoga, Ohio.—*Improvement in Smut Machines*.—Patent dated May 1, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the holes *h* in the stationary scouring plates Q and Q¹, for the purpose of causing the grain to pass up and down through them, and thus to facilitate the operation of scouring by attrition between the grain as well as the rubbing surfaces, substantially in the manner described.

I also claim the additional scouring face *d* on the dishes N, when the same is used in combination with the stationary and revolving scouring plates, substantially in the manner and for the purpose described.

No. 28,118.—DAVID S. WAGENER, of Penn Yan, N. Y.—*Improvement in Threshing Machines*.—Patent dated May 1, 1860.—A is a fan; it is placed in connection with the separating case S, and is made to revolve rapidly by any ordinary belt or connection; when revolving it causes a current of air to pass through the case S in the direction of the arrows, meeting the grain while passing through the separating case at B, thus separating the light from the heavy grain.

Claim.—The case S enclosing the winnowing apparatus, with the feeding wheels *g* and *g*¹, when combined with the threshing and separating chamber V, the tube F *t t*, and slats *n*, as above described.

No. 28,119.—WILLIAM B. WEBSTER, of Foxville, Va.—*Improvement in Grain Cleaners*.—Patent dated May 1, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The employment of a system of rollers R R¹ R² covered with cloth, felt, or other similar fibrous article, arranged in pairs, with their surfaces in contact, in combination with scrapers S, the whole operating substantially as set forth, for removing cockle from grain.

No. 28,120.—WILLIAM WELLS, of Boston, Mass.—*Improvement in Lasting Machines*.—Patent dated May 1, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the combination, in a lasting machine, of a holding mechanism for the purpose of holding the last and the materials thereon, with the lasting straps *g g*, when these are combined with yielding springs *h h* or are elastic in themselves, and are arranged to operate on the vamp of a boot or shoe, substantially as specified.

Also, the combination, in a lasting machine, of converging toe or heel slides, or both, with yielding or elastic lasting straps.

Also, in combination with converging toe or heel slides, the block *q*, carriage *m*, and screw *r*, or its equivalent, for the purpose set forth.

No. 28,121.—LEWIS WHITEHEAD, of Nunda, N. Y.—*Improvement in Halters*.—Patent dated May 1, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the construction of the gutter piece with two rings, or their equivalents, in such manner that the neck band may be attached to the upper one, while the chin piece or split lead passes through the ring at the lower end.

Second. The construction of the neck band in two parts and its attachment to the upper ring of the gutter piece.

No. 28,122.—R. A. WILDER, of Cressona, Pa.—*Improvement in Hoisting Machinery*.—Patent dated May 1, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, in combination with a hoisting wheel suitably furnished with cogs or other means of turning it, the ring or bearing of wood to receive the rope or cable that runs over it, constructed, arranged, and operating substantially as described.

Second. I claim the shroudings *e* on hoisting wheels, to take the strain of the burden upon the rope or cable, and thus relieve the journals or axles thereof, as set forth.

Third. I claim, in a hoisting apparatus, the arrangement of the hoisting, friction, guiding, and holding wheels, and the rope or cable, as described and represented, the whole forming a compact, reliable, and cheap hoisting apparatus, as set forth.

No. 28,123.—CHARLES A. WILSON, of Cincinnati, Ohio.—*Improved Steam Boiler Regulator*.—Patent dated May 1, 1860.—This invention is designed to extend the range of action and efficiency of those boiler attachments in which a hydrostatic column, acting through an inverted syphon, is made to regulate the generation and pressure of steam.

The inventor says: I *claim*, first, the inverted syphon H I, branches J K, and check valve L, in the described combination with a steam boiler, for the purposes set forth.

Second. The described combination of the inverted syphon H I, with the cup N, float O, and dampers F G, for the purposes described.

Third. The supplementary pipe I¹, provided with a check valve *a*, and connecting the float cup N with the bottom of the syphon H I, for the purposes set forth.

No. 28,124.—YOUNG F. WRIGHT, of Green Hill, Ga.—*Improvement in Cotton Presses*.—Patent dated May 1, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Arranging the revolving screw nut or burr by which the screw shaft and follower of a cotton press are operated within a block, which is hinged to the upper part of the frame of said press, for the purpose of enabling the operator to swing the block and follower on said hinges, so as to clear the press box when it is to be filled, substantially in the manner described.

No. 28,125.—TILLOTSON CLARKSON, of South Adams, Mass., assignor to B. F. PHILLIPS & Co., of said South Adams.—*Improvement in Looms*.—Patent dated May 1, 1860.—This invention consists in the arrangement, relatively to each other, and for united operation, of cams, a ratchet wheel, a pawl, auxiliary treadles, a main actuating treadle, and the harness.

Claim.—The arrangement, relatively to one another and for united operation, of the auxiliary treadles J J¹, pawl I, main treadle B, ratchet wheel G, cams F F, and harness D¹ D², in the manner and for the purpose described.

No. 28,126.—STEPHEN G. COLEMAN, of Providence, R. I., assignor to himself and WILLIAM COLEMAN, of said Providence.—*Improved Mousing Hook*.—Patent dated May 1, 1860.—This invention consists in constructing the hook in two parts, and so locking or connecting such parts together, as not only to add strength and efficiency to the hook, but great facility in connecting or disconnecting it to or from any article or object.

Claim.—As an improved article of manufacture, a hook A, provided with a perforated stud D, and a movable strengthening hasp E, as shown and described.

No. 28,127.—EDWARD COTTY, of Brooklyn, N. Y., assignor to ADAM HAFT, of said Brooklyn.—*Improved Folding Bedsteads*.—Patent dated May 1, 1860.—The object of this invention is to obtain a folding metallic bedstead that may be folded within a small compass, and have its head and foot pieces so arranged that they may be adjusted in a more or less inclined position, or readily detached or so adjusted as to give the bedstead bottom an inclined position like a lounge, and also allow the bedstead to be shortened if desired.

Claim.—The attaching of the head and foot pieces C C to the side pieces *a a* of the bottom A, by means of the sliding or adjustable sockets D and screws *d*, substantially as and for the purpose set forth.

No. 28,128.—JAMES P. ELLICOTT, of Washington, D. C., assignor to PHELAN & COLLENDER, of New York, N. Y.—*Improved Billiard Table Pocket Irons*.—Patent dated May 1, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, a pocket iron of a billiard table, substantially as described, so that it may yield when struck by a ball, and regain its original position after the force of the ball has been spent, as and for the purposes set forth.

Second. Hinging the pocket irons to two arms, combined with elastic washers and ball-

shaped nuts, substantially as described, for the purpose of allowing the pocket iron to yield with a parallel motion, as set forth.

Third. The pocket iron, substantially as described, so that the outer side of the pocket iron and of the rail of the billiard table shall be one continuous surface, and a recess for introducing the netting and elastic strap formed, and thus a neat finish secured, and the player not interfered with, as set forth.

No. 28,129.—HUMPHREY JACKMAN, of Elizabethport, N. J., assignor to JAMES H. DEMING and T. H. JENKINS, of New York, N. Y.—*Improvement in Journals and Boxes for Railroad Cars*.—Patent dated May 1, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The said cone on the axle, in combination with the box provided with friction rollers, the journals of which are supplied with oil by projections on the axle, which, by the rotation, carry up the oil from the lower part of the box, and apply it to the journals of the said rollers, the cone having the effect to catch the oil which is scattered by the operation of lubricating the journals of the rollers, and carry it back into the box, as specified.

No. 28,130.—DUNCAN McKENSIE, of Brooklyn, N. Y., assignor to MARY ANN ELIZABETH McKENSIE, of said Brooklyn.—*Improvement in Ovens*.—Patent dated May 1, 1860.—In the centre of the top of the oven is a tubular opening L, which communicates with the main flue I¹ by a flue I². In the oven G are arranged a suitable number of gravitating pans N, which are hung from rods N, which extend across from two circular revolving plates R R, turned by a shaft S, having its bearings in each side of the oven. The bread pans are placed on these pans or swinging shelves N, and the whole number are rotated at one time by turning the shaft S, the bread is thus made to receive a uniform heat.

The inventor says: I *claim*, the combination of the hot air flues D, escapes K K, and flue I, with the lower part or floor of the oven C¹, as and for the purpose shown and described.

I also claim the enlargement and downward extension of the rear end of flue I, in combination with flue I¹, as and for the purpose shown.

I also claim the arrangement, in combination with the oven G, of the flues I¹ I² I D, and the dampers K K and L, as and for the purpose shown and described.

No. 28,131.—H. A. REYNOLDS, of New York, N. Y., assignor to ROBERT T. WILDE, of said New York.—*Improved Clamp for Bonnet Frames*.—Patent dated May 1, 1860.—This invention consists of a metal clasp of an elastic character and peculiar construction, which enables it to be readily applied to secure the wire to the margin of the shape at suitable intervals, and is readily removed when the confinement of the wire is no longer necessary.

Claim.—The elastic clamp, constructed and operating substantially as described, for purposes substantially such as that specified.

No. 28,132.—JOHN STUBER, of Utica, N. Y., assignor to JOHN CARTON, of said Utica.—*Improvement in Lamps*.—Patent dated May 1, 1860.—A is the can; B the opening for filling the can with oil, closed with a screw; C the burner enclosing the wick; D the outer tube; E the cap or chimney holder; F the conducting tube; I is the air chamber; K K² the air tube; L the glass chimney contracted as seen at a; M the button, and N n² the tubes on the bottom of the can for conducting the oil from the can through the opening P P² to the conductor F.

The inventor says: I *claim*, first, the air chamber I, and the air tube K K², as described, or substantially in that form, in combination with a shallow can, as described.

Second. The outer tube D, in combination with the cap E, chimney L, and button M, as substantially described

No. 28,133.—ELI TIFFANY, of Thompsonville, Conn., assignor to himself and GEORGE COOPER, of said Thompsonville.—*Improvement in Knitting Machines*.—Patent dated May 1, 1860.—This invention consists in the arrangement of the needles, and the application of one press bar to a flat ribbed knitting machine.

The inventor says: I *claim*, first, the single presser bar D, and its arrangements, whereby it is made to operate and perform the duty of the two presser bars that are now usually employed.

Second. I claim the arrangement of the two sets of needles, crossing each other at right angles, whereby the barbs of each are acted on by the single presser bar D reciprocally.

No. 28,134.—GEORGE W. WHIPPLE, of West Acton, Mass., assignor to H. ROWELL & Co., of said West Acton.—*Improvement in Powder Flasks*.—Patent dated May 1, 1860.—This invention consists in a circular gate revolving within the charger itself around a pivot central with the axis of the charger and a spiral spring coiled round the post on which the gate revolves, for the purpose of closing the gate when released from the hand of the person using it.

Claim.—The described cut-off for powder flasks, consisting essentially of the gate *f*, disk *d*, and spring *m*, operating substantially as specified.

No. 28,135.—BENJAMIN HARDY, of New York, N. Y., administrator of the estate of AARON WILLIAMSON, deceased, late of New York, N. Y., assignor to himself and THOMAS FRANCE, of said New York.—*Improvement in Narrow Ware Looms.*—Patent dated May 1, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Constructing one portion of the raceway of a tongued plate *G*, applied substantially as described, to constitute a guide which leaves a continuous, unobstructed opening in front of the reed clear across the loom, substantially as and for the purpose described.

No. 28,136.—JOHN A. BROCK, of Chicago, Ill.—*Improved Amalgamator.*—Patent dated May 1, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A revolving disk *e* subdivided into a number of receptacles *ii* in combination with an upper revolving ribbed disk *o*, the two disks revolving in opposite directions, so that the ribs of the upper disk carry the pulverized ore all over the surface of the mercury, and the lower disk carries the mercury in a still plane towards the ore, substantially in the manner and for the purposes set forth.

No. 28,137.—JAMES A. GRAY, of Albany, N. Y.—*Improvement in Pianofortes.*—Patent dated May 1, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, what is termed the full iron plate of a pianoforte with an upward projecting rim *c c* along its back and sides and round the front corners, to form the upper portion of the exterior of the case, substantially as described.

Second. Casting the bottom *C* of the music rack or desk, and the brackets *b b*, to which its sides are attached, with what is termed the full iron plate, substantially as specified.

No. 28,138.—GEORGE H. JONES and JOHN BROWN, of Rose, N. Y.—*Improvement in Water Wheels.*—Patent dated May 1, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The employment of the regulating lever *f*, float *D*, and gate *e*, actuated by the discharge water of the wheel, to regulate the speed thereof, substantially in the manner and for the purpose shown and described.

No. 28,139.—GEORGE B. ARNOLD, of New York, N. Y.—*Improvement in Sewing Machines.* Patent dated May 8, 1860.—The inventor says: By this invention I am enabled to take two pieces of cloth of unequal lengths, and placing their edges together, with the longer piece at the bottom, and by running them through the machine, not only to gather the bottom cloth to any desired degree of fullness, but to sew them firmly together at the same time.

The inventor says: I *claim*, first, a gathering and feeding mechanism, in two distinct parts, so constructed and operated that the gatherer takes hold of and moves the cloth up to the needle, leaving it immediately after the stitch is formed, or at the point where it is formed, and the feeder, properly so called, takes hold of and feeds the cloth after the seam is made.

Second. I claim the combination of the part *E J* with the part *B G*, or their equivalents, operating together substantially as described and for the purposes specified.

Third. I claim regulating the fullness of the gathers by varying the relative throw of the feeding devices, substantially as described.

No. 28,140.—JAMES E. ATWOOD, of Bucksport, Me.—*Improvement in Pumps.*—Patent dated May 8, 1860.—This invention consists in the combination of the parts of the pump.

Claim.—The combination of the main cylinder *J* with air chamber *K*, regulating screw *L*, stationary chamber *D*, valves *E* and *A*, with the discharge pipe *C*, the whole operating in the manner and for the purpose set forth.

No. 28,141.—STEPHEN L. AVERY, of Norwich, N. Y.—*Improvement in Windlasses.*—Patent dated May 8, 1860.—The object of this invention is to apply a brake to a windlass in such a manner that articles attached to the windlass and raised by it may be lowered with facility, the hitherto slow and tedious manual reverse movement of the windlass being avoided and the invention at the same time permitting the operator to have complete control over the descending movement of the article lowered.

Claim.—The lever *H*, provided with the pins *e f* and projection *g*, and attached to the sleeve or collar *G*, which is placed loosely on the shaft *B*, in connection with the ratchet *E* attached permanently to the shaft *B*, the pawl *F*, and bearing *i*, all arranged for joint operation, substantially as and for the purpose set forth.

No. 28,142.—WILLIAM J. BAKER, of Dimock, Pa.—*Improvement in Seeding Machines.*—Patent dated May 8, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement of the wheel G having a toothed and blank periphery, spaced as described, the ratchet H, adjustable shaft E, provided with the pinion *b* and the crank pulley *c* connected with the seed slides *q* through the medium of the levers *t t* and rods *s s u w v*, and used in connection with the spring *b*, as and for the purpose set forth.

Second. The frame H, provided with the seed-distributing devices and furrows and covering shares, when suspended to the axle A and used in connection with the mechanism employed for operating the seed slides $q^1 q^1$, as and for the purpose specified.

No. 28,143.—SILAS D. BALDWIN, of Milwaukie, Wis.—*Improvement in Generators for Vapor Lamps.*—Patent dated May 8, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Placing the generator at right angles to the slit of the burner, and so attaching it to the end of the tube or generating chamber as to allow of its being closer upon or further from the top of the burner, and to be susceptible of being used as set forth.

No. 28,144.—EDWARD E. BEAN, of Boston, Mass.—*Improvement in Sewing Machines.*—Patent dated May 8, 1860.—This invention consists in the peculiar arrangement and combination of the different parts of mechanism for producing the single chain stitch.

Claim.—The arrangement and combination of the crotchet needle F, thread carrier *l*, and looper H, consisting of the spring prongs *d d*, operating in conjunction, as set forth.

No. 28,145.—CHRISTIAN B. BECKER, of Lancaster County, Pa.—*Improved Meat Chopper.* Patent dated May 8, 1860.—The revolving block K, with its cogs M, rests on an upright shaft *s* on an adjustable screw point; this screw passes through a burr in the bed piece B of the frame A, differing from those in common use only by having a ring L surrounding the block open, instead of entire; this opening is drawn together by a strap and buckle *l* to the cleats on the ring, so as to overlap each other, thereby made adjustable to the shrinking of the block or its expansion through heat, or otherwise becoming loose.

Claim.—The specific arrangement of the adjustable ring L, hoisting rack and handled ratchet R *r* S, for raising the choppers, binding nut and handle T, in combination with the sliding braces *g g*, and attached cross pieces F G, constructed in manner and for the purpose described.

No. 28,146.—DAVID BEDELL, of Seneca Falls, N. Y.—*Improved Gate Pulley.*—Patent dated May 8, 1860.—This improvement consists in an arrangement of pulleys, an extension bar for adapting the weight used for closing to the weight of the gate and adjusting it to either the right or left hand gate.

Claim.—The reversible extension bar E which bears the fulcrum pulley H, constructed and arranged in combination with its frame or support A, and in relation to the stationary pulley G and gate or door D, substantially as and for the purposes specified.

No. 28,147.—C. T. BOARDMAN, of Bergen Point, N. J.—*Improvement in Making Sheet Metal Pipe.*—Patent dated May 8, 1860.—This invention consists in the use of adjustable rollers, a removable former, a brake or locking bar, and a pipe support, whereby the desired end is attained.

The inventor says: I *claim* the employment or use of the rollers B C C, when used in connection with a removable "former," and while the sheet metal is bent, substantially as and for the purpose described.

I further claim, in connection with the rollers B C C, the brake or locking bar E and the pipe support G, arranged to operate as and for the purpose set forth.

No. 28,148.—GEORGE C. BOVEY, of Chillicothe, Ohio.—*Improvement in Automatic Draw Bridge Canals.*—Patent dated May 8, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of arrangements by which the draws of the bridge are opened, readjusted, and secured, substantially as delineated and described, the whole working as shown in model and drawings.

No. 28,149.—J. L. BRIDGE and W. B. LODGE, of Vernon, N. Y.—*Improvement in Formers for Forming Seamless Felt Caps.*—Patent dated May 8, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The employment or use of a flexible or sectional "former" R, constructed so as to be capable of being elongated or transformed from an oblate to a prolate spheroid, substantially as and for the purpose specified.

No. 28,150.—SAMUEL B. BROAD, of New York, N. Y.—*Improved Life-Saving Raft*.—Patent dated May 8, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A life raft, constructed as described, by forming it of three or more flexible and inflatable water proof pontons, each incased by a cage or network of rope, in combination with a flexible deck bound and braced by rope, as described, and cross spars arranged to block with the cages of the pontons, and the whole being lashed and united together, essentially as and for the purpose or purposes set forth.

No. 28,151.—STEPHEN BURROWS, of Whitewater, Wis.—*Improvement in Rice and Clover Hullers*.—Patent dated May 8, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the combination of the revolving inclined bolting cylinder D, supported in the frame J, as described, with the thrashing cylinder B, when the said bolting cylinder is driven by the frictional contact of the shaft *b*, the whole being constructed and operating as described.

Second. The combination of a concave C, which has parallel sides, pins *c c*, which gradually diminish in length from the receiving to the discharging end of the machine, and the conical cylinder B, having teeth *d d*, of gradually diminishing length, placed spirally on its circumference, in such manner that the degree of the spirals decreases as the teeth approach the discharging end of the cylinder, substantially as and for the purposes set forth.

No. 28,152.—WILLIAM A. BURY, of Grosse Isle, Mich.—*Improved Bill of Fare*.—Patent dated May 8, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The application of a series of rings (independent and adjustable) to a changeable bill of fare, as described.

No. 28,153.—JACOB BUSSE and JAMES B. HARMER, of Philadelphia, Pa.—*Improvement in Machinery for Propelling Railroad Cars, &c.*—Patent dated May 8, 1860.—*h h* are helical springs for the purpose of keeping the ends of the levers *c c* in place; *i i* are connecting rods, connecting the ends of the levers *o o* with the crank wheels *k k*; *l* the crank; *p p* links connecting the ends of the levers *o o* with the levers *c c*, *c¹ c¹*, at their fulcrum; *s s* are the driving wheels.

Claim.—The levers *o o*, *c c*, *c¹ c¹*, in connection with the crank wheels *k k*, the spur wheels *f f¹*, and the pinions *g g¹*, or their equivalents, the whole combined substantially in manner set forth and for the purposes specified.

No. 28,154.—JAMES CALKINS and PHILIP A. HOVER, of Hudson, N. Y., and CHARLES W. GRANNIS, of Gowanda, N. Y.—*Improved Furnace for the Combustion of Coal Oil and similar Hydro-Carbon Fluids*.—Patent dated May 8, 1860.—This invention consists in placing beneath, or connecting with steam boilers, shallow metallic vessels, or pans, for containing petroleum, coal oil, or other hydro-carbon fluid to be used as a fuel, and so constructing and arranging them that currents of air may be forced into and made to commingle with the flames of the burning fluid.

Claim.—The fuel pan, in combination with the chamber pan, and both constructed and arranged substantially in the manner and for the purpose set forth.

No. 28,155.—D. M. CHURCH and C. H. ELLSWORTH, of Birmingham, Conn.—*Improvement in Bosom Expanders*.—Patent dated May 8, 1860.—This invention consists in an arrangement of bows of cane, whalebone, metal, or other suitable flexible strips united together so as to form a convex, heart-shaped frame covered with any suitable material so as to possess elasticity and flexibility, and provided with suitable hooks and loops for attaching the same to the body.

Claim.—A bosom expander, composed of strips A B C, hooks *b b c*, loops *d*, and otherwise made as shown and described.

No. 28,156.—JOSEPH H. CLARK, of Westbrook, Me.—*Improvement in Wringing Clothes*.—Patent dated May 8, 1860.—To operate this machine, set it upon the tub and fold the clothes to wring and wrap the webbing *W¹* around one end of the clothes and turn at the crank until the friction of the webbing takes hold of the clothes, then place the other end of the clothes in the adjustable holder H, by wrapping the webbing *W* around them and turn at the crank until the water is finally expressed.

Claim.—The employment and use of the adjustable slide H, with its friction holder *W*, in combination with the twisting friction holder *W¹*, in its combination with A and F, substantially as and for the purpose set forth.

No. 28,157.—LORING COES and AURY G. COES, of Worcester, Mass.—*Improvement Rolling the Shanks and Bars of Screw Wrenches*.—Patent dated May 8, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim*, first, a pair of cut away rolls having a pair of grooves formed in them, as described, and when said grooves incline in contrary directions to each other, in such a manner that the fin formed in one shall be rolled down in the other, substantially as set forth.

We also claim, in combination with a pair of rolls having inclined grooves in them, as set forth, a guide bar in rear of said rolls with inclined openings corresponding to those between the grooves, for the purpose of preventing the bar from turning in said grooves, as set forth.

No. 28,158.—ERNST CONSTANTINI, of New York, N. Y.—*Improvement in Apparatus for Evaporating Liquids*.—Patent dated May 8, 1860.—This invention consists in forming an evaporator for the rapid evaporation of liquids containing salt, by effecting an increased contact of the liquid with the atmosphere by causing the liquid to be spouted or thrown upwards as in fountains.

Claim.—The rapid evaporation of saline and other liquids by means of spouts or fountains, constructed in the manner and for the purpose substantially as described

No. 28,159.—HARO J. COSTER, of Chicago, Ill.—*Improved Rocking Chair*.—Patent dated May 8, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Combining with a rocking chair a fan acting automatically by means of spring P, in the rocker Y, cord Z, pulley K, spring M, rod F, all arranged substantially as and for the purpose specified.

No. 28,160.—ANDREW CROW, of Middlefield, Mass.—*Improvement in Rifle Canes*.—Patent dated May 8, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of a walking stick with a pistol or rifle barrel, when the explosion of the percussion cap or cartridge is effected by atmospheric pressure, substantially in the manner set forth.

No. 28,161.—J. E. CROWELL, of Chelsea, Mass.—*Improvement in Machinery for Spinning Yarn*.—Patent dated May 8, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination, with the geared rollers A, and revolving flanged casing B, of a stationary box D, which has its inner circumference screw threaded, and encloses the geared rollers and casing, and serves for insuring the turning of the rollers vertically during their movement with the casing horizontally, substantially as and for the purposes set forth.

Second. The combination of the revolving drawhead casing B, with a box made in two parts D and E, in order that on taking off the top of the box the casing with the rollers and gear wheels can be got at or removed when out of repair, while dust is effectually excluded from the rolling gear wheels by having the top closed upon the box when the machine is operated, substantially as set forth.

No. 28,162.—LYMAN DERBY, of New York, N. Y.—*Improvement in Locks*.—Patent dated May 8, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the use of the screw K, and nut L, having a pin or shoulder N on the side of it, in combination, substantially as described, and for the purposes set forth.

Second. I also claim the use of the axis F, having a shoulder d^1 on its outer end, and an adjustable cap plate G on its inner end, in combination, substantially as and for the purposes set forth.

Third. I also claim the use of the stem H, thumb screw I, and knob J, or equivalents, in combination, substantially as described, and for the purposes set forth.

Fourth. I also claim the use of the hollow axis B, in combination with the axis F, and knob J, substantially as described, and for the purposes set forth.

Fifth. I also claim the use of the tumbler barrel or case A, in combination with the hollow axis B, and screw K, substantially as described, and for the purposes set forth.

Sixth. I also claim the use of the tumblers O and O², made substantially as described, in combination with the screw K and nut L, for the purposes set forth.

Seventh. I also claim the use of the reversal guides on the interior of the barrel A, in combination with the tumblers and nut L, substantially as described, and for the purposes set forth.

Eighth. I also claim the use of the latch pin R, and detent spring S, or equivalents, in combination with the barrel or case A, and nut L, substantially as described, and for the purposes set forth.

No. 28,163.—JULIUS C. DICKEY, of Saratoga Springs, N. Y.—*Improved Machinery for Crushing Quartz*.—Patent dated May 8, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The employment of a revolving cone on a stationary cone, made sufficiently high to form a mortar on the top of the stationary cone, in combination with a stamper or stampers working in the said mortar, for the purpose of crushing, grinding, and pulverizing quartz rock containing gold, in the manner and for the purpose set forth.

No. 28,164.—CHARLES H. DUBS, of Natchez, Miss.—*Improvement in Locks for Metal Bale Hoops*.—Patent dated May 8, 1860.—The object of this invention is to obtain a lock that will firmly secure the two ends of the bale hoop together without weakening the hoop by the formation of the lock, so that the hoop at the lock and at points adjoining will be equally strong as at any other points.

Claim.—The combination of the three prongs *e e f*, with the hoop end B, and plate C, as and for the purpose shown and described.

No. 28,165.—SELAH DUSTIN, of Detroit, Mich.—*Improvement in Alarm Valves for Steam Boilers*.—Patent dated May 8, 1860.—The claim and engravings explain the nature of this invention.

Claim.—So combining with an elevated or separate chamber, into which water or steam may flow from the boiler through a suitable pipe or passage, as the water line in the boiler rises above or falls below a given height, a float and valve, or a float and valves, as that the float shall, by its upward force, when said chamber is supplied with water, close said valve or valves and act by its gravity, when unsupported by water, in conjunction with the steam in that case in the chamber, in opening said valve or valves to allow the escaping steam to ring a bell, blow a whistle, or sound an alarm when the water is too low in the boiler, substantially as described.

No. 28,166.—RICHARD H. EWING, of Nicollet County, Min.—*Improved Rocking Chair Convertible into a Cradle*.—Patent dated May 8, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Attaching the upper part of the chair to a swivel bed by means of bar hinges, in combination with the swivel bed attached to the rocker truck by means of a pin, in the manner described, and for the purposes set forth.

No. 28,167.—CHARLES W. FLIPPEN, of Laurel Grove, Va.—*Improvement in Hydraulic Presses*.—Patent dated May 8, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, combining the piston of a hydraulic or tobacco press with a disk, the bore of which is of the same diameter as the piston, and with a cylinder, the hollow space of which is of a larger diameter than the piston, substantially as and for the purposes set forth.

Second. In the retainers of tobacco presses, combining one of the retainer bolts with a lever and swivel joint on the top of said bolt, for the purpose of keeping the top retainer plate suspended, or raising it when necessary, substantially as set forth.

No. 28,168.—N. S. GILBERT, of Albion, N. Y.—*Improved Method of Feeding the Bolt in Shingle Machines*.—Patent dated May 8, 1860.—To the frame A, and directly below the racks *j j*, levers Q Q are attached by fulcrum pins *q*, the levers Q directly in line with levers O O, the lower ends of the former acting against the latter; against the lower parts of the levers o springs R bear. S is a shaft which is fitted in the bearing *r*, on the frame A, and has a loaded arm *s*, attached to it. The ends of the shaft S are bent in a crank form, and extend underneath the pawls *i i* of the levers O O.

Claim.—The arrangement of the pawls *i i*, racks *j j*, holding pawls *p p*, levers O Q, and wheels N, provided with the projections *f*, for the purpose of feeding the bolt to the knife, as set forth.

No. 28,169.—J. H. GOOCH, of Oxford, N. C.—*Improvement in Ploughs*.—Patent dated May 8, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Making the mould board extension in two parts, A and B, the dividing line between the two parts A and B being horizontal, or nearly horizontal, for the purpose of transforming the plough into a cultivator, sub-soil, or complete turning plough, by simply detaching either one or both of those two parts, substantially as set forth.

No. 27,170.—W. B. GORDNIER, of Coudersport, Pa.—*Improved Churn*.—Patent dated May 8, 1860.—This invention consists in hanging the chamber box, dasher, and dash rod in a swing, and operating the swing by means of a treadle, so as to give to the churn a pendulum motion, and to the dash rod a reciprocating and rotary motion at the same time.

Claim.—The combination, with the vibrating frame C, carrying the churn E, of the arms F F, and the spiral plate G, cord K, pulley J, and treadle L, all being arranged and operating in the manner and for the purposes set forth

No. 28,171.—CHARLES HARVEY, of Richmond, Ind.—*Improvement in Apparatus for Evaporating Sugar Juices.*—Patent dated May 8, 1860.—This invention consists in providing two pans, each the width of the heating surface of the furnace and hinged to each other at their sides to render them more portable and to allow one to be inclined, while the other is on a level, and supported on guides which pass at right angles with the furnace and allow one pan to be in contact with the heat, while the syrup is drawn off from the other not in contact.

Claim.—The hinged pans D E, arranged substantially as described, and for the purpose set forth.

No. 28,172.—GEORGE E. HAYES, of Buffalo, N. Y.—*Improvement in Thermometer Cases for Steam Boilers.*—Patent dated May 8, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim making the case and the part of the thermometer in which the mercury tube is packed in one piece, and screwing the said piece to a socket D, or its equivalent, which secures the thermometer to the boiler or steam apparatus in such manner as to compress the packing and make a steam tight joint round the tube, substantially as specified.

And I also claim the bow m, with cam-like ends applied to a valve i, in the socket D, or its equivalent, in combination with the spring j, substantially as and for the purpose specified.

No. 28,173.—ROBERT J. HILL, of Americus, Ga.—*Improvement in Machines for Sowing Fertilizers.*—Patent dated May 8, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the revolving hooks e e, and small hoes B B, the sliding plates C and D, to regulate the openings, and the sliding rod and bearing on the shaft to connect and disconnect the pinion g, with the wheel of the cart, as specified, for the purposes set forth.

No. 28,174.—HENRY HOCHSTRASSER, of Philadelphia, Pa.—*Improved Moulding for Hanging Pictures.*—Patent dated May 8, 1860.—This improved moulding is designed to be secured to the walls of rooms, halls, &c., by means of wood screws, and placed immediately under the cornice G of the ceiling of the room, leaving from the top a space of about a quarter of an inch for the reception of the hook S.

Claim.—A moulding with a projecting lip or rabbet A, or its equivalent, substantially as and for the purposes as described.

No. 28,175.—WILLIAM HOFFMAN, of Solano County, Cal.—*Improved Frog for Bayonet Scabbards.*—Patent dated May 8, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Making the frog of the bayonet scabbard in two parts, as described, when the said parts are united together by a bolt, or other equivalent device, substantially in the manner and for the purpose set forth.

No. 28,176.—BIRDSILL HOLLY, of Lockport, Mo.—*Improvement in Sewing Machines.*—Patent dated May 8, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim, first, constructing the machine, so that by means of the hollow bearing shaft C, or its equivalent, it may be turned on the axis of the driving pulley B, for access to the parts below the table without unbanding the pulley, substantially as set forth.

Second. I claim the method of setting or adjusting the needle by turning the swivel tubular bearer E, in the posts D D, substantially as shown and described.

No. 28,177.—REUBEN G. HOLMES, of Worcester, Mass.—*Improved Churn.*—Patent dated May 8, 1860.—A shows the main frame of the churn, the same having a cylindrical reservoir H, which is made open at its top, and has its sides formed of metal and attached at their top surfaces to the longitudinal bars B C. Within the reservoir a dasher is disposed, the same being affixed to a horizontal shaft E, which has one of its journals supported in a suitable bearing disposed on the side of the churn, while its other end extends through the end of the reservoir and carries a gear wheel F.

Claim.—My improved churn, having its several parts constructed and arranged in relation to each other, and so as to operate together substantially as shown and described.

No. 28,178.—JACOB HOVEY, of Bedford, Mich.—*Improvement in Hame Tugs.*—Patent dated May 8, 1860.—The claim and engravings explain the nature of this invention

Claim.—The combination and arrangement of the box A, spring B, π in a , slide C, tug D, and sliding loop E; the loop being made adjustable upon the box, so that the back and belly straps will have an automatic adjustment; the several parts being connected and used substantially as and for the purpose specified.

No. 28,179.—J. M. HUNTER, of New York, N. Y.—*Improvement in Machines for Cutting Fat.*—Patent dated May 8, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, slicing the fat by the cutter G, which is rotated and moved vertically at the same time, as set forth.

Second. In combination with the rack K, and pinion J, or their equivalents, operating G by the ratchet and pawl G¹ T, or their equivalents, so as to act with a positive motion during the entire descent, and to release G during the ascent, as described, to avoid losing time and power in overcoming the momentum of the cutting disk, and for the purpose of clearing off the material without increasing the labor of operating.

Third. The adjustable frame E, as described, in combination with the pinion J, and fixed rack K, or their equivalents, for lowering the shaft g, as the disk becomes smaller, without affecting any of the other portions of the machine.

Fourth. The flaring of the trough B, as described, for the purposes set forth.

Fifth. Operating the cutting disk by the combination of a heart cam motion, with a rack and pinion motion, substantially as and for the purposes set forth.

Sixth. Sharpening and trueing the cutting disk, while in operation, by means of the adjustable surfaces N and N¹, arranged substantially as set forth.

No. 28,180.—C. L. INGRAHAM and EMERY ROUNDS, of Berlin, Wis.—*Improved Washing Machine.*—Patent dated May 8, 1860.—The claim and engravings explain the nature of this invention.

Claim.—What we claim is not the pump on the wheel separately, but the combination of the pump as arranged with the wheel or cylinder, which has a slatted or open periphery, the two being so arranged and connected that the water will be raised from the box by the pump, and injected upon and among the clothes through the open periphery of the cylinder as it revolves, substantially as specified.

No. 28,181.—ELIAS T. INGALLS, of Haverhill, Mass.—*Improved Machine for Burnishing the Edges of Boot and Shoe Soles.*—Patent dated May 8, 1860.—The claim and engravings explain the nature this invention.

The inventor says: I *claim*, first, subjecting the edge of the sole and heel of the boot or shoe, caused to travel and guided in a fixed path, either by machinery or by hand, to the action of a burnishing tool, either held stationary or having a vibrating or other proper motion communicated to it by any suitable arrangement of mechanical devices, as set forth.

Second. Producing an elastic yielding motion to the burnishing tool, both in a vertical and lateral direction, by means substantially as described.

Third. So arranging the tool stock that the tool can be set at any desired angle, so as to conform to any shape and bevel of the edge of the sole and heel, as described.

Fourth. So hanging the tool stock that it can turn in its bearings, whereby the tool will conform to the curves and elevations and depressions of the different portions of the sole and heel, and therefore prevent its cutting into and defacing the same as would otherwise be the case.

No. 28,182.—JOHN LOUIS JULLION, of Aberdeen, Great Britain.—*Improvement in the Preparation of Paper.*—Patent dated May 8, 1860; patented in England, November 9, 1858.—The claim explains the nature of this invention.

The inventor says: I *claim*, first, the use of compounds, prepared by precipitation, from watery or other solution of the earths and acids before mentioned, to consolidate and harden paper.

Second. The use of chloride or oxy-chloride of zinc with glutinous matter, as a size for paper.

Third. The use of any of the before-mentioned prepared inorganic bodies, mixed with the sizing agent, to facilitate the absorption of writing and printing ink.

No. 28,183.—CHARLES KINZLER and WILLIAM ROSEBROCK, of New York, N. Y.—*Improved Apparatus for Cutting or Dividing Loaf Sugar.*—Patent dated May 8, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim*, first, the combination and arrangement, with circular saws, of the revolving frame B, provided with arms n and m , operating in such a manner as to take hold of a loaf of sugar, carry the same through the saws, and deposit the cut slabs upon a suitable table, substantially as specified.

Second. We claim the arrangement of attaching the eccentric grove E, to a movable lever, operating in the manner described and for the purpose set forth.

Third. We claim the manner of working the revolving finger frame B, by means of the clutch K, acted upon by the lever L, in the manner and for the purpose substantially as described and specified.

No. 28,184.—HENRY KNIGHT, of Jersey City, N. J.—*Improvement in Moulds for Moulding Cement Pipes*.—Patent dated May 8, 1860.—F is a metallic mould made of little less diameter than rim b, so as to fit snugly within the same. This mould is made in two semi-cylindrical sections, having flanches S S, by which they are locked together through the aid of the straps t t, and the wedge staples n n. G is a removable collar of the core. This collar is placed over the top of the core during a certain stage of the operation of moulding the pipe, it is made removable to allow the ready introduction and the running down of the cement in the mould.

The inventor says: I claim, first, the combination of the stationary core B, mould F, with base E b, and hinged table C, constructed and arranged for joint operation in the manner and for the purpose described.

Second. The stationary core B, and mould F, having the enlarged top d e f, and base F b, in combination with hinged table C, and detachable collar G, in the manner and for the purpose substantially as specified.

No. 28,185.—MARTIN R. LEMMAN, of Columbus, Miss.—*Improvement in Machinery for Felting Hat Bodies*.—Patent dated May 8, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The placing of the rollers C C C¹ C¹ eccentrically on their axis a, substantially as shown and described, so that said rollers will act or press alternately in pairs on the article between them, for the purpose set forth.

No. 28,186.—JOHN LIGHTFOOT, of Cold Spring, Ky.—*Improved Door Fastener*.—Patent dated May 8, 1860.—The fastener is placed against the door post in such a position that the fangs a a may face the post, and the end of the bolt C that passes through the plate A, may come in contact with the post.

Claim.—The combination of the plates A and B, hinged bolt C c, and spring d; the whole being constructed, arranged, and operating substantially as and for the purposes set forth.

No. 28,187.—WILLIAM S. LOUGHBOROUGH, of Rochester, N. Y.—*Improvement in Iron Ties for Cotton Bales*.—Patent dated May 8, 1860.—This invention consists in providing iron ties with a ball, operating against an inclined plane, so as to allow the hoop or band to be taken up when necessary, without requiring any readjustment of the tie.

Claim.—The construction of iron ties, substantially as and for the purposes specified.

No. 28,188.—GEORGE T. LUFBERY, of New York, N. Y.—*Improved Machine for Making Paper Bags*.—Patent dated May 8, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim, first, the cylinder D, constructed with bands and fillets D¹ D² D³, and furnished with grippers, substantially as described, to perform the several operations of taking the blank from a pile and conveying it toward the lap-folding apparatus, and of pasting the laps and printing it while on its way to such apparatus.

Second. The grippers i i, applied and operated by stationary arched plates H H, in combination with springs k k, substantially as described.

Third. The pronged fly Q, applied and operating in combination with cylinder D, to strip the pasted blank from the paste fillets of said cylinder, substantially as described.

Fourth. The arrangement of the folding table S, and lap folders T T, the fly Q, and the pasting and printing cylinder D, substantially as described.

Fifth. The fly W, applied in combination with the folding bed S, in the manner and for the purpose specified.

Sixth. The stationary curved needle, applied and operating in combination with a hole in the fly W, or its equivalent, by which the bags are thrown out of the folding apparatus, substantially as and for the purpose specified.

No. 28,189.—ALFRED WILLIAM JOHN MASON, of New Orleans, La.—*Improved Machine for Drying Sugar*.—Patent dated May 8, 1860.—This invention consists in combining a spout, drum, and slides, with a revolving fan or beater, and automatic ventilating valves, for the purpose of drying sugar or other similar substances.

Claim.—Combining a spout B, drum C, and slides F G E, with a revolving fan or beater D, and automatic ventilating valves H H, substantially as and for the purposes set forth.

No. 28,190.—C. A. McEvoy, of Richmond, Va.—*Improved Bolt for Car Seats*.—Patent dated May 8, 1860.—This invention consists in a portable self-fastening bolt, in combination with a detached pin, to use in connection with car seats, or other objects to which it may be applicable.

Claim.—A portable self-fastening bolt, constructed as described, in combination with a detachable pin, as and for the purposes set forth.

No. 28,191.—JOHN NEFF, JR., of Pultney, Vt.—*Improvement in Cultivators*.—Patent dated May 8, 1860.—P P are adjustable and supporting screws, put through the ends of the cross piece M, and resting upon the frame; they are used to support and change the position of the supports L L, and prevent too great stress upon the lever N.

Claim.—The arrangement of the crank shaft H, the handles I, couplings K, springs J, supports L, cross piece M, and screws P, constructed and operating as described, for the purpose set forth.

No. 28,192.—REUBEN NICKERSON and ALBERT B. COLTON, of Athens, Ga.—*Improvement in Valve Cocks*.—Patent dated May 8, 1860.—This invention consists of a new mode of applying the nut in which the screw thread on the valve stem works.

Claim.—The flanged nut F, fitted and applied to the socket c c, and secured by the screwed cap E, substantially as described.

No. 28,193.—WALTER PECK, of Rockford, Ill.—*Improvement in Pumps*.—Patent dated May 8, 1860.—This invention consists in certain improvements of construction in double-acting pumps.

The inventor says: I *claim*, first, coupling the lower end of the pump to a fixed stand P, or its equivalent, by means of a universal joint, substantially as described, for the purpose set forth.

Second. In combination with the moving rod or pipe a, the stationary collar e, and sliding collar f; the whole arranged and operating substantially as described, for the purpose set forth.

No. 28,194.—T. W. PORTER, of Bangor, Me.—*Improved Shoe Plate*.—Patent dated May 8, 1860.—This invention consists of an improved metallic concave plate or cork, to be applied to the bottoms of boots and shoes, to protect them from wear, and to protect the feet from slipping.

Claim.—The concave plate or cork, as described.

No. 28,195.—WILLIAM S. PRATT, of Williamsburg, N. Y.—*Improvement in Anti-Friction Journal Boxes*.—Patent dated May 8, 1860.—This invention is an improvement upon such journal boxes as make use of friction rollers, interposed between the axle and the outer bed or plate of such journal boxes, and has more particular reference to the internal arrangement of such rollers, so as to avoid all sliding friction by the motion of such rollers about the pin or axis passing through them.

Claim.—The use and application of the rollars a a a, placed within the rollers A A, and revolving around the fixed axis E, substantially as and for the purposes set forth.

No. 28,196.—FRANCIS B. RICHARDSON and BYRON L. RICHARDSON, of Boston, Mass.—*Improvement in Enema Syringes*.—Patent dated May 8, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Our improved manufacture of elastic bulb enema syringes, as made by combining an elastic bulb A, two long flexible induction and eduction pipes B C, and two separate valve chambers K F, with a three-fold separate connector I, for connecting the elastic bulb and flexible pipes.

No. 28,197.—ELIJAH ROBERTSON, of Hartford, Conn.—*Improvement in Potato Diggers*.—Patent dated May 8, 1860.—This invention consists in the application and arrangement of a vertical side wheel, actuating a pinion and rotating crag wheel or shaft with a series of tongs or fingers to separate the soil and loosen the potatoes from the same after they are ploughed up.

Claim.—The application and arrangement of the inclined crag or finger wheel D, for the purpose specified, in the combination with the share B, the serrated mould board A, the vertical side driving wheel E, and pinion G, in the manner and for the purpose substantially as set forth and described.

No. 28,198.—DAVID B. ROGERS, of Pittsburgh, Pa.—*Improvement in Cultivator Teeth*.—Patent dated May 8, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Attaching the bolt by which the tooth is secured to the beam to the shank of the tooth, by wrapping the shank around it, and passing a portion of the shank, together with the bolt, into the beam, in combination with the shoulder and stay point, formed out of the upper end of the shank, substantially in the manner described, for the purpose of attaching the tooth to the beam of a cultivator.

No. 28,199.—OCTAVE SAULAY, of New Orleans, La.—*Improvement in Lamps.*—Patent dated May 8, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the dome H, constructed with spiral chambers L L L, through which the air is circulated and heated, with a lamp, arranged and described, for illuminating the apartment; the lamp and its mountings being used to illuminate, warm, and ventilate, substantially as set forth.

No. 28,200.—ADDISON M. SAWYER, of Athol, Mass.—*Improved Mode of Applying Steam Power to Propellers.*—Patent dated May 8, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A propeller, having passages and orifices for the passage of steam, for the purpose of causing the same to revolve under water, as described.

No. 28,201.—SAMUEL J. SEELY, of Albany, N. Y.—*Improvement in Gates for Canal Locks.*—Patent dated May 8, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the use of corrugated metal plates, to form the body of the lock gate, for the purpose of giving to the gate increased strength, without unduly increasing its weight, as described.

Second. Forming, of the corrugated spaces of the lock gate, air chambers, as set forth, to give buoyancy to the gate to allow it to be operated with a small amount of power, as described.

No. 28,202.—BEZALEEL SEXTON, of East Windsor, Conn.—*Improvement in Machinery for Drying Cloth.*—Patent dated May 8, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the perforated segment plate connected with the blowing apparatus, in combination with the wheel armed with tenter hooks, or their equivalents, and the rollers, or their equivalents, for introducing the cloth, to make part of a hollow cylinder and for drawing off the cloth when dry, substantially as described.

No. 28,203.—SAMUEL SHADBOLT, of Scottsville, N. Y.—*Improvement in Stoves.*—Patent dated May 8, 1860.—This invention consists of a fire pot of particular construction, and in the peculiar arrangement of smoke flues and air pipes.

Claim.—The particular arrangement or combination of the fire pot described, with the smoke flues *d d* and air tubes *e e*, as set forth and described.

No. 28,204.—M. A. SHEPARD, of Parkersburg, Ill.—*Improvement in Floating Sluices for Mill Races.*—Patent dated May 8, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* a sluice or race B, supported on a running stream by means of suitable floats or boats C, and fitted between upright guides E, substantially as and for the purpose set forth.

I also claim, in connection with the sluice or race B, a vertical shaft G, connected either directly or indirectly with the water wheel, and made to pass loosely through the power pulley H, to admit of the rising and falling of the shaft G with the wheel and race without affecting pulley H.

No. 28,205.—SAMUEL H. SILL, of Geneva, N. Y.—*Improvement in Gates.*—Patent dated May 8, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination of the levers L and L¹ with the cam C, formed and arranged with reference to the gate, substantially as described, whereby the gate is elevated, disengaged from the cam stop and fastenings, partially revolved and disengaged from the lever, substantially as set forth.

Second. The arrangement with the above of the cam C¹ and the standards S, substantially in the manner and for the purpose set forth.

No. 28,206.—GEORGE W. SLOUGH, of Canton, Ohio, assignor to E. BALL & Co., of said Canton.—*Improvement in Making Guard Fingers for Harvesters.*—Patent dated May 8, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Forming the blank guard, as shown in Figs. 11, 13 and 15, from a section of a

bar or piece of wrought iron, as shown in Figs. 4, 6, and 8, by the mode or process substantially as described, whereby the shank *g*, shoulder *f*, surface *k*, and lip *j* of each guard are formed with precision and celerity, while a sufficient amount of metal is reserved at the point *h* to form the point of the guard

No. 28,207.—ALFRED E. SMITH, of Bronxville, N. Y.—*Improvement in Making Axle Boxes*.—Patent dated May 8, 1860.—This invention consists in an improved manufacture of malleable iron axle boxes for wagons, &c., making the external and internal surfaces of the box of fine steel-like hardness, and yet leave the body of the metal to retain its toughness or malleability to resist sudden fracture like ordinary chilled cast iron boxes.

Claim.—A new and useful improvement in the manufacture of malleable iron axle boxes, by means of the operations described, and for the purpose of producing an article cheaper, more expeditiously, and of a better and more useful kind than heretofore known.

No. 28,208.—DAVID SNEDEKER, of New York, N. Y.—*Improvement in Tools for Opening Barrels*.—Patent dated May 8, 1860.—This invention consists in applying to a hammer handle a slotted and jointed rack bar, with an adjustable claw, to be used for the purpose of drawing hoops off of barrels and casks, drawing nails, and opening the heads of barrels.

The inventor says: I *claim* the combination of pivotted rack plate *D*, with the sliding adjustable claw plate *B*¹ and lever *B*, substantially as and for the purpose set forth.

I also claim making a slot in the end of the rack plate *D* and in the use of the spring *g*, arranged between jaws *b b*, as set forth, and the novel construction of the parts whereby they may be locked closely to the handle, as described and represented.

No. 28,209.—GEORGE A. STANLEY, of Cleveland, Ohio.—*Improvement in Candle Moulding Apparatus*.—Patent dated May 8, 1860.—This invention relates to a clamp, arranged with a top and bottom piece so connected together as to allow a slide to move between them longitudinally by means of a lever or its equivalent.

Claim.—The special arrangement of the slide *C* and upper and lower pieces *H H*¹ and lever *D*, when operating conjointly in the manner and for the purpose specified.

No. 28,210.—GEORGE A. STANLEY, of Cleveland, Ohio.—*Improvement in Candle Mould Boxes*.—Patent dated May 8, 1860.—This invention consists in constructing a mould box *D* of such a form as to cool the sprues of the candles as rapidly as any other part.

Claim.—The special arrangement of the upper section *B* with the candle moulds when operating conjointly, and in the manner specified.

No. 28,211.—GEORGE STEVENSON, of Zionsville, Ind.—*Improvement in Apparatus for Evaporating Liquids*.—Patent dated May 8, 1860.—*A* is an endless ring of metal, to which one end of the graduated arm *B* is rigidly secured, while the other end of it passes freely through the slot *a* in *A*. The bar *B* is graduated from zero (0) either way.

Claim.—The rotating shaft *D*, the adjustable perforated blades or skimmers *F*, and the springs *b*, constructed and operating in combination with the partitioned pan *B*, substantially as described.

No. 28,212.—OSCAR C. SQUYER, of West Dresden, N. Y.—*Improvement in Compensating Spring Balances*.—Patent dated May 8, 1860.—This invention consists in the peculiar arrangement and application of the two sides or wings, and the curved pins attached to the same, and the recovery spring relatively to a shaft or central axis.

Claim.—The metallic spring endless ring *A*, in a circular or oval form, with the graduated arm or bar *B*, hooks *C C*¹, and rings *D D*¹, constructed and operated as substantially set forth.

No. 28,213.—JOSEPH W. STRANGE, of Bangor, Me.—*Improved Self-Fastening Dress Hook*.—Patent dated May 8, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* my self-fastening dress hook, as described, with the axle or shaft *c c*, the wings *W W*, the recovery spring *S*, the curved pins or hooks *h h*, and the perforated flanges severally marked "*i*," and upon the wings *W W*, or if said dress hook be formed in any manner substantially the same

No. 28,214.—ROBERT R. TAYLOR, of Reading, Penn., assignor to the BORDENTOWN MACHINE COMPANY.—*Improvement in Furnaces*.—Patent dated May 8, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the foundation plates *G* and *G*¹, with their retaining ribs, the side plates of the furnace with the vertical ribs, and the bars *H*, with their vertical recesses; the whole being arranged and adapted to each other and applied to the brickwork of a furnace, substantially as and for the purpose set forth

Second. I claim the detachable plates *n*, adapted to the lugs *x x* on the side plates, and arranged, in respect to the openings on the same, in the manner and for the purpose specified.

Third. The box *K*, carrying the ash pit door, and connected to the foundation plates *G* and *G*¹ by bolts *q q*; the whole being arranged as set forth, for the purposes specified.

No. 28,215.—EARL D. THOMAS, of Rochester, N. Y.—*Improved Washing Machine*.—Patent dated May 8, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement of the pinion upon the power shaft, the double toothed or ratchet bar, the levers, and the spring for giving the traverse to the box, as described, and in connection therewith—

Second. I claim the arrangement of the pounders having the spring yoke connection set forth, and attached to the main shaft by the cranks placed at the right angles to each other, as described.

No. 28,216.—GEORGE W. TOLHURST and DANIEL C. SARTWELL, of Liverpool, Ohio.—*Improvement in Dumping Wagons*.—Patent dated May 8, 1860.—Upon the ends of the cross pieces at *G* are placed leaders or connections *H*; said connections extend along the dumper from each cross piece to the forward part of the foot board marked *G*, and are held in a convenient position by the cleat *J*. *K* is the driver's seat, and *L* are partitions, formed of two sections.

Claim.—The combination of the adjustable partitions *L L L L*, sliding cross-piece *D D D D*, and side leaders or connections *H H H H*, the whole being arranged and combined for operation as described and set forth, not confining ourselves to the number or size of the compartments which contain the manure.

No. 28,217.—J. B. TURNER, of Jacksonville, Ill.—*Improvement in Seeding Machines*.—Patent dated May 8, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination of a rotary, corrugated, seed distributing shaft *f*, swinging or regulating plate *h*, and a gauge plate or cut-off *G* placed within a seed box *A*, and arranged to operate as and for the purpose set forth.

Second. The combination of two seed distributing devices, as above, when placed in a seed box *A* divided into two compartments by a partition *g* and placed on a plough or cultivator frame, the whole being arranged, substantially as described, to admit of the sowing of seed or grain broadcast or in drills alternately from one mode to the other, as may be required, while the machine is in operation, for the purpose specified.

Third. The general arrangement of the seed box *A*, beam *B*, handles *C C*, and wheel *D*, as shown and described, whereby the wheel and seed box are allowed to rise and fall independently of the beam, and the working parts prevented from being disarranged or injured by any irregular movement of the plough, and the flow or discharge of the seed or grain rendered more uniform than it otherwise would be

No. 28,218.—ALEXANDER VAN VALKENBURGH, of Griffin's Corners, N. Y.—*Improvement in Ox Shoes*.—Patent dated May 8, 1860.—This invention consists in providing for each part of the hoof a sole plate with an inclined heel flange, and fitted with a strap extending over the fore part of the hoof, so as, in combination with the inclined heel flange and a slight suspending link secured thereon, to firmly bind it when the suspending heel link is secured, and allow its ready removal by a proper force when the link is released.

The inventor says: I *claim*, first, the strapped shell *M N*, with its inclined heel flange *B*, and a supporting heel link, combined and arranged to form an ox shoe possessing the qualities described.

Second. Uniting and sustaining the two strapped shells *M N M N* by the double link *E* and strap and buckle *G H*, or their equivalents, substantially in the manner set forth.

No. 28,219.—GEORGE H. VAN VLECK, of Buffalo, N. Y.—*Improved Churn*.—Patent dated May 8, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the churn box, the dashers and staff, and the adjustable hinged board *C*, the bottom of the box being provided with pins for adjusting the board, and said board being provided with openings the edges of which present different angles to the cream, as the position of the board is changed with reference to the sides of the box, substantially as and for the purpose specified.

No. 28,220.—EDMUND VICTORY, of Watertown, Mass.—*Improvement in Machinery for Spinning Yarns*.—Patent dated May 8, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the mechanism described, or its substantial equivalent,

for regulating the draft and of adjusting the hold of the draw and feed rollers on the fibre for the purposes set forth, whereby the distance between the draw and feed rollers is rendered adjustable and controllable, whether while the machine is in motion or not, and without discontinuing the roving, substantially as specified.

Second. The general construction and arrangement of parts of a draw head as combined with its discoidal shield, substantially in the manner and for the purposes set forth.

Third. Constructing the circular stationary rack in two parts and attaching the one of said parts to the cap of the draw head standard, to facilitate the removal of the draw head, substantially as specified.

No. 28,221.—SYLVESTER W. WARREN, of Brooklyn, N. Y.—*Improvement in Hose Coupling*. Patent dated May 8, 1860.—This invention consists of a pipe or hollow seat for a key, which key passes across through one pipe and acts against the edges of mortises in a surrounding pipe, to force the ends of said pipes or couplings towards each other and make a perfectly tight connection.

Claim.—The hollow key seat 4 across the coupling *b* receiving the key *c* that connects the parts *b* and *a*, in the manner substantially as specified.

No. 28,222.—MORRIS WELLS, of Brooklyn, N. Y.—*Improvement in Making Kettle Ears*. Patent dated May 8, 1860.—This invention has for its object the manufacturing of kettle or bucket ears in a more neat and handsome style, with little trouble, and of refuse scraps of tin, such as are usually thrown away.

Claim.—The kettle ears, constructed in the manner set forth, forming a new article of manufacture.

No. 28,223.—CHARLES WESTON, of Salem, Mass.—*Improved Method of Hanging Reciprocating Saws*.—Patent dated May 8, 1860.—This invention consists in the employment of two reciprocating saw gates, placed one behind the other, between suitable guides, and operated by a pitman from reverse cranks on a driving shaft.

Claim.—The employment or use of two gates *B B*, placed one in front of the other and connected by suitable pitmen *C C* to cranks *D D* having reversed positions relatively with each other and formed on the same driving shaft *E*, substantially as and for the purposes set forth.

No. 28,224.—ALOYS WHITE, of New Haven, Conn.—*Improved Musical Instrument*.—Patent dated May 8, 1860.—This invention consists of a musical instrument composed of a series of metal springs, such as are used to produce the musical sounds in what are known as musical boxes, attached to a sound board, and a series of finger keys, and suitable mechanism in connection therewith, for playing upon said springs.

The inventor says: I *claim* a musical instrument composed of a series of springs *b* attached to a sound board, and a series of keys, and suitable mechanism in combination therewith, for playing upon the said springs.

I also claim the fly lever *D*, fly *E*, and let-off lever *F*, applied in combination with each other and with the key *C* and stationary ledge *g*, to operate substantially as described.

And I further claim the arrangement of the damper in combination with the spring *b* and the fly lever *D*, substantially as described.

No. 28,225.—E. H. WHEELER, of New Orleans, La.—*Improvement in Apparatus for Defecating Cane Juice*.—Patent dated May 8, 1860.—This invention consists of a cistern *A* of convenient size. In the centre of this cistern is placed a vertical tube *B* communicating with and attached to a centrifugal drum or wheel *C*, which drum or wheel has openings on its periphery *L*; on the top of the tube *B* is an oil joint *D*, for the purpose of connecting the pipe *E* which communicates with the retort *G*; at a short distance above the cover of the cistern is a driving pulley *F* to give motion to the vertical tube *B*.

The inventor says: I *claim* combining the several agents by which I produce a thorough and complete dissemination of the sulphurous gas or sulphurous acid gas in the cane juice.

No. 28,226.—JAMES P. WIGAL, of Henderson, Ky.—*Improved Apparatus for Feeding Saw Dust to Furnaces*.—Patent dated May 8, 1860.—This invention consists of a box that extends over the whole of the furnace, communicating with the same on either end by two flaps or doors, in combination with a sliding piston and counterweights, in such a manner that saw dust fed to the box is alternately discharged through one and through the other of the openings at the end of the box, said flap doors being opened as the piston advances towards the same, and closed when the piston recedes.

Claim.—The arrangement of the automatically closing flap doors *E E* in combination with

the reciprocating piston G and box C, constructed and operating substantially as and for the purpose described.

No. 28,227.—JOHN S. WILLSON, of Waynesboro', Ga.—*Improvement in Ploughs*.—Patent dated May 8, 1860.—This plough is made without any welding or upsetting of the metal, and the invention consists in the manner in which the plough is made, and the plough, the standards and their several connections, are united.

Claim.—In combination with the plough the beam and the false coulter, the standard made and connected therewith, substantially as described.

No. 28,228.—WILLIAM H. WILSON, of Denton, Md.—*Improvement in Automatic Raking Apparatus for Harvesters*.—Patent dated May 8, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Combining, with a revolving post and a stationary cam, a mechanism substantially such as described, whereby a rake connected to said post shall have a revolving, reaching, and tipping motion, as set forth, to adapt it to the sweeping of the platform of the cut grain, and delivering it in a compact gavel on the ground, as described and represented.

No. 28,229.—DANIEL A. WOODBURY, of Rochester, N. Y.—*Improvement in Air Pumps for Steam Engines*.—Patent dated May 8, 1860.—This invention consists in the employment in an air pump of a piston elongated at one or both ends, whereby both water and air are caused to be discharged simultaneously from the commencement of the stroke, and sufficient air is retained to serve as a cushion to the piston to the end of the stroke. It also consists in a certain arrangement of the passages and valves, whereby the simultaneous discharge of water and air is provided for.

The inventor says: I *claim*, first, the elongation of the piston of the air pump at one or both ends, substantially as herein specified, to produce the result set forth.

Second. The arrangement of the three valve chambers, the valves, valve ports, and passages, substantially as and for the purpose set forth.

No. 28,230.—GEORGE WOODS, of Boston, Mass.—*Improvement in Reed Musical Instruments*.—Patent dated May 8, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the application of a pressure escapement, substantially as described, to the reed and key, in order that on depression of the key the reed may be simply pressed upon or actuated without any percussive force, and afterward set free and suffered to freely vibrate, as specified.

I claim the combination constituting the pressure escapement, and as arranged and applied to the key and the reed, substantially as specified, such combination consisting of the above described spring slider *e*, the fly or grasshopper *g*, the weighted lever *h*, and the lifting devices *n o* thereof, or their equivalent.

No. 28,231.—HENRY A. ALDEN, of Matteawan, N. Y., assignor to the NEW YORK RUBBER COMPANY.—*Improvement in Hose Tubing*.—Patent dated May 8, 1860.—The claim and engravings explain the nature of this invention.

Claim.—As a new and useful improvement in a hose or flexible pipe or tube formed of woven fabric C, with a water proof lining, substantially as specified, covering the inner edge of the tube at its longitudinal lap or joint with a water proof lapping strip, essentially as and for the purposes set forth.

No. 28,232.—JOHN BAWDEN, of Freehold, N. J., assignor to GILBERT COOMBS, of said Freehold.—*Improvement in Potato Diggers*.—Patent dated May 8, 1860.—This invention consists in the use of two double mould board ploughs, provided with teeth at their back ends, and attached to one and the same foot or standard in such a way as to act consecutively, or one after the other, the front plough, as the implement moves along, opening the hills or drills and partially elevating the potatoes, and the back plough fully elevating the same and leaving them on the surface of the earth behind the implement.

Claim.—The employment or use of the two ploughs D E provided with the teeth or springs *d f*, and applied to the foot or standard C of the beam A, substantially as and for the purpose set forth.

No. 28,233.—LEVI W. BUXTON, of Nashua, N. H., assignor to himself and MARK STARRETT, of said Nashua.—*Improved Bed Bottom*.—Patent dated May 8, 1860.—This invention consists of a bed bottom made of an upper and lower series of slats, with spiral springs interposed between them, the lower series being held in place and kept at a proper distance apart

by a cross rail at each end, into suitable mortises in which the ends of the slats enter, these cross rails being made removable for the convenience of folding up the bed bottom.

Claim.—The removable rail D, operating substantially as described, for the purpose specified.

No. 28,234.—ELISHA CLARK, of New York, N. Y., assignor to himself and J. W. PADDON, of said New York.—*Improved Paper File.*—Patent dated May 8, 1860.—This invention consists in the combination of the main bar with a bar recessed into it and held up by springs against a fold which is joined to the main bar, and may be folded down upon it in such a manner as to form together a neat and simple file for news and other papers.

Claim.—The paper file described, made by arranging the grooved bar 1, bar 3, springs 4 4, and bar 7, in combination with each other, in the manner described and shown, the parts being constructed substantially as and for the purpose set forth.

No. 28,235.—R. B. FITTS, of Philadelphia, Pa., assignor to himself and W. L. GILROY, of said Philadelphia.—*Improved Ink Reservoir for Pens.*—Patent dated May 8, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Making the said reservoir substantially in the manner described, of sheet metal perforated with numerous minute holes, as set forth, and for the purpose specified.

No. 28,236.—CHARLES H. HUNTER, of Indianapolis, Ind., assignor to himself and WILLIAM THORNBERRY, of said Indianapolis.—*Improvement in Grain Scales.*—Patent dated May 8, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the peculiar shaped balancing lever or beam *i*, when constructed with the bifurcated curved ends in which the point of suspension for the weighing hopper is made, as and for the purpose shown.

Second. The combination of the trip lever 5 with the cut-off 6 and 7, when said lever is used for the purpose described.

Third. The horizontal balancing lever 9, when constructed with poising and adjustable weight *a* at one end, and used for the objects expressed.

Fourth. The perforated ratchet register wheel *e*, with pin *g* and with slide and pawl *f*, when the several parts are used in conjunction, as shown in the preceding specification, and for the purposes therein expressed.

No. 28,237.—WILLIAM KINGSLEY, of New York, N. Y., assignor to himself and J. J. FIELDS, of Brooklyn, N. Y.—*Improvement in Car Springs.*—Patent dated May 8, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the toggle arms A A, arranged as specified to compress a spring between the ends of said toggle arms and give a yielding motion between the respective parts, as set forth.

I claim the arrangement of the toggle arms A A and bearing fork C, combined with the rubber or elastic block E, taking the plate D when under heavy compression, as set forth.

No. 28,238.—SAMUEL J. LADD, of Providence, R. I., assignor to H. L. WEBSTER & Co., of said Providence.—*Improved Metallic Cup and Stand.*—Patent dated May 8, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A new and improved metallic cup and stand, as a new and improved article of manufacture, the part composing the stand being the base of a truncated cone, the sides being regular or irregular, according to the taste of the workman; the whole made of a single piece of metal by the operation of spinning.

No. 28,239.—WILLIAM J. McCLELLAND, of New York, N. Y., assignor to ERNEST GREENFIELD, of said New York.—*Improvement in Machines for Cutting Lozenges.*—Patent dated May 8, 1860.—The claim and engravings show the nature of this improvement.

The inventor says: I *claim*, first, the combination of rollers B B¹ and plate E with the reciprocating cutters *a a a* and plungers *c c c*, arranged in a suitable relation to each other, and operating substantially as and for the purposes set forth.

Second. The perforated plate P interposed between the plate E and cutters *a a a*, for cleaning the scraps from the cutters, substantially as set forth.

No. 28,240.—JOHN W. MURPHY, of Philadelphia, Pa., assignor to A. ROBERTS and P. ROBERTS, of said Philadelphia.—*Improvement in Iron Truss Girders.*—Patent dated May 8, 1860.—This invention consists in the employment of packing pieces so arranged, in respect to the posts and angle iron chords, that the posts and packing pieces shall serve to retain the vertical flanges of the angle iron chords in their proper position free from all liability to warp; the posts at the same time serving as bearings for the horizontal flanges of the angle

iron, while the packing pieces, which may be varied in thickness throughout the length of the girder, serve to impart a graduated rigidity to the same.

Claim.—The combination of the within described angle iron chords, packing pieces, and posts or verticals, when applied and arranged in respect to each other, as and for the purpose set forth.

No. 28,241.—C. B. RICHARDS, of Brooklyn, N. Y., assignor to SAMUEL J. SEELY, of New York, N. Y.—*Improved Hook Catch for Doors.*—Patent dated May 8, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the hook H, with the locking catch S, constructed, applied, and operating substantially as described, whereby the said catch can be operated to simply latch the hook in place, or to securely lock the same, as set forth.

No. 28,242.—JOHN RANDALL, of Elmira, N. Y., assignor to himself and REUBEN R. SMALLEY, of Troy, N. Y.—*Improvement in Steam Engines.*—Patent dated May 8, 1860.—The steam cylinder A is constructed with a dividing plate b in the centre, thus forming two distinct working cylinders with a piston c in each, which are connected by the piston rods d and the pitmen e with the cranks f f¹, on the axis of the pulleys g g¹, arranged parallel to each other, and supported in suitable bearings h and i.

The inventor says: I claim, first, the double cylinder engine constructed, arranged, and operating substantially as set forth.

Second. I combination therewith, I claim the method described of gearing the said engine to the main or driving shaft, so as to dispense with the ordinary balance wheel.

No. 28,243.—WILLIAM L. WILLIAMS, of New York, N. Y., assignor to himself and THOMAS J. O'CONNER, of said New York.—*Improvement in Machines for Bundling Wood.*—Patent dated May 8, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim, first, a series of clamps k, acting on the ends of the split kindling wood, contiguous to the place from which the bundle is removed, for holding up the mass of wood, as set forth.

Second. The sliding follower b, in the trough a, for moving the wood along in said trough and conveying it into the bundling apparatus, as specified.

Third. The yielding semi-circular supporting slide f, taking the sides of the pieces of kindling wood as they stand in the trough a, and assisting in gathering them in a bundle, and at the same time preventing them from falling down as pressed along in the trough, as set forth.

Fourth. I claim the revolving jaw 4, and sliding blocking piece 6, for receiving, holding, and twisting the wire, as set forth.

Fifth. The jaw or jaws r, between the bundle of kindling wood and the apparatus for twisting the wire, the same acting to confine the wire near the bundle while being twisted, as and for the purpose set forth.

Sixth. One or more expansive ring bands or wires applied to compress the wood into a compact bundle by drawing upon and tightening the said band or wire, for the purposes and as set forth.

No. 28,244.—GEORGE B. ARNOLD, of New York, N. Y.—*Improvement in the Manufacture of Ruffles.*—Patent dated May 8, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The ruffle described, as a new article of manufacture, the gathered cloth A being secured to the binding B by the single series of stitches C, which perform the double duty of confining the gathers and of securing the gathered cloth to the binding, substantially as set forth.

No. 28,245.—W. CLARE ANDERSON, of St. Louis, Mo.—*Improvement in Lifting Jacks.*—Patent dated May 15, 1860.—This invention consists in the use of a hollow stand or upright provided with a base and a pawl at its upper end, and having a rack bar fitted within it, to the upper part of which a slotted lever is attached in such a manner as to raise the article to which it is applied, and to remain permanent after raising the article by the weight of said article alone, no other adjustment of the lever being required.

The inventor says: I claim the rack bar B, and the lever C, the latter being provided with an oblong slot e, through which and the upper part of the bar B, the fulcrum pin D passes, the rack bar being fitted in a stand A, or equivalent device, to operate as and for the purpose set forth.

I further claim, in connection with the lever C, and rack bar B, arranged as shown, the lugs or projections g, attached to the lever, and at such a distance from the bar B, to operate as specified.

No. 28,246.—LUTHER ATWOOD, of New York, N. Y.—*Improvement in the Construction of Apparatus for Redistillation of Coal Oils*.—Patent dated May 15, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A separating chamber, constructed substantially as described, when arranged and combined with a volatile oil still and condenser, in such manner as to gradually separate and condense the heavier parts of the oleaginous vapors formed, and continuously return them to the still, for a further action of the heat, and at the same time preserve the lighter vapors, and pass them over to the condenser, substantially as described, and substantially for the purposes set forth.

No. 28,247.—ISAAC A. BENEDICT, of West Springfield, Pa., and G. W. CUMMINGS, of Conneaut, Ohio.—*Improvement in Ditching Machines*.—Patent dated May 15, 1860.—The guide O being brought forward towards the buckets, and the guide O¹ at the same time pushed back from and out, the arms on their ascending come in contact with the guide O, and having a lateral movement, are thereby easily turned to one side of the machine, and the buckets are made to discharge their contents on the opposite side of the machine, upon which the guide rods are brought to act.

The inventors say: We *claim*, first, the arrangement of the sleeve G, sliding shaft F, in combination with adjusting arms and segment gear and pinions, in the manner and for the purpose described.

Second. We claim the adjusting guides O O¹, and guides P P¹, in combination with the movable buckets M, when arranged and operating conjointly, in the manner and for the purpose set forth.

Third. We claim the springs and levers, in combination with the revolving hinged buckets M, in the manner and for the purpose specified.

No. 28,248.—DANA BICKFORD, of Westerly, R. I.—*Improved Compressed Air Engine*.—Patent dated May 15, 1860.—The claim and engravings explain the nature of this invention.

Claim.—One or more reservoirs for compressed air, with movable air-tight head, to be operated with either weight, screw, lever, spring, or any similar power, for the purpose of keeping up a uniform pressure upon the contained air, combined with an engine, of any form, for the purpose of propelling vehicles or machinery, the whole constructed, arranged, and operating substantially as set forth.

No. 28,249.—JAMES S. BLACK, of Bloomfield, Ky.—*Improvement in Bee Hives*.—Patent dated May 15, 1860.—The trap is designed for catching the moth or other enemies of the bee, which are caused to fall from the upper part of the palace when attacked by the bees, or from any other cause. It consists of a perforated chamber *m*, a perforated removable sliding bottom *n*, and a funnel shaped conductor *o*, said conductor partly overhanging the chamber *m*, and leading to the same.

Claim.—The combination and arrangement of the bee palace, constructed as described, with the moth trap constructed as described, for the purpose set forth.

No. 28,250.—WILLIAM N. BROWN, of Camden, N. J.—*Improvement in Vapor Burners*.—Patent dated May 15, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the combination of a heat conductor with a non-conductor in hydro-carbon vapor burners, for the purpose of securing to the heat conductor the greatest possible heat-conducting power, by employing a metallic heat conductor, encased in a non-conducting or partially non-conducting material, as described, and for the purpose set forth in the above given description of my invention and in the drawings hereunto annexed, or any other mode substantially the same, and which will produce the intended effect.

No. 28,251.—ANDREW BUCHANAN, of Jersey City, N. J.—*Improved Arrangement for Balancing Slide Valves of Steam Engines*.—Patent dated May 15, 1860.—The object of this invention is to regulate the pressure of steam on the upper and on the under side of a slide valve, according to the difference between that portion of the under surface of said slide valve which is exposed to the pressure of the steam and the entire upper surface of the valve; this device being more particularly applicable to that class of slide valves in which the steam from the boiler acts on the under side, thereby producing a tendency to lift up the valve and cause an escape of the steam.

The inventor says: I *claim*, first, the combination, with a slide valve, to which the steam is admitted from the under side, of a valve A, arranged with a stem D, and enclosed in steam-tight chamber C, substantially as and for the purpose specified.

Second. The arrangement of the cap F, with legs *e*, and fitting on a seat *c*, around the hollow stem D, in combination with the valve A, constructed and operating substantially as and for the purpose described.

Third. The arrangement and combination of the valve A, movable seat B, cap F, and regulating pins *f*, constructed and operating substantially as and for the purpose set forth.

Fourth. The arrangement of the pipe G, communicating with the steam chest through the chamber C, substantially in the manner and for the purpose described.

No. 28,252.—ASA L. CARRIER, of Washington, D. C.—*Improved Saw Set*.—Patent dated May 15, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the construction and arrangement of a series of rotating punches and their corresponding matrices working together, to set the teeth of saws alternately to the right and left at the same time, thereby completing the operation, by passing it once through the machine.

Second. I claim the upright guides, the adjustable slide B, to regulate the degree of set in saws, in combination with the rotating punches, as described, for the purposes specified.

No. 28,253.—H. L. CASTILE, of Memphis, Tenn.—*Improvement in Axle Boxes*.—Patent dated May 15, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The employment of the cone-sided block G, having the base resting upon the journal B, in combination with the inclined sided seat A, as shown and described, so that a space J will be left between the upper part of the block G, and the seat A, and the fibres of the block will be laterally compressed, all as set forth.

No. 28,254.—A. W. CHASE, of Ann Arbor, Mich.—*Improvement in Invalid Bedsteads*.—Patent dated May 15, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The peculiar shape or construction of the bed posts adapting them to the open or false mortises, with the head and foot boards constructed to correspond thereto, in combination with the spring bolts to keep them in position, or allow any desired change, substantially as and for the purposes set forth.

No. 28,255.—JOHN CHANTRELL, of Bristol, Conn.—*Improvement in Knitting Machines*.—Patent dated May 15, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, so applying and operating the frame needles, the rib needles and the sinkers of a ribbed knitting machine, in combination with each other, that after the sinkers have given the loops to the frame needles, the rib needles take their loops directly from the sinkers at the back of the frame needles, substantially as specified.

Second. Constructing the sinkers with recesses, in which the ribbed needles are arranged to operate, and across which the loops are extended, in the manner and for the purpose specified.

Third. The pressers J J applied, operated, and operating substantially as set forth.

Fourth. I claim applying the selvage fingers, and operating them by means of an arm attached to a slider which operates the needles, substantially in the manner specified.

Fifth. I claim combining the bar which carries the yarn guide with a slider which operates the needles by means of grooved blocks Q Q¹ and spring catches R R¹, acted upon by stationary wedges y y¹, substantially as described.

No. 28,256.—JOHN L. CHENEY, of Lowell, Mass.—*Improvement in Machinery for Winding Laps*.—Patent dated May 15, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The method of winding a lap lightly upon a small wood roller, disconnected from any weight or motion otherwise than that given to it by the rollers between which it revolves, by the combination of the three rollers, or their equivalent, arranged substantially as and for the purpose described.

No. 28,257.—ORVILLE CHOATE, of Morrisville, Vt.—*Improved Mop Wringer*.—Patent dated May 15, 1860.—By pressing the treadle down the rollers C C¹ will be forcibly brought together, and by placing a mop between the rollers and then bringing them together and drawing a mop between them the water in the mop may be squeezed out; the mop will afterwards serve the purpose of drying the washed parts.

Claim.—The arrangement of the toggle levers a a b b within the uprights or frame B B¹ in combination with the pressing rollers C C¹ and treadle arms D, as and for the purpose shown and described.

No. 28,258.—T. G. CLAYTON, of Washington, D. C.—*Improvement in Vapor Lamps*.—Patent dated May 15, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the converting of the fluid into gas or vapor below the illuminating flame by means of the combined generator and burner B and the jets of burning vapor below said burner and generator, the whole operating as described and for the purposes set forth.

Second. The burner and generator B having the gas chamber C below it, constructed and operating substantially as set forth.

Third. The use of jets of gas from chamber C or burner B for making an oxy-hydrogen flame for heating below the combined generator and burner, as set forth.

No. 28,259.—JOHN B. CORNELL and WILLIAM W. CORNELL, of New York, N. Y.—*Improvement in Metallic Rolling Shutters*.—Patent dated May 15, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim* preventing the longitudinal slitting of the individual slats of a rolling metallic shutter, by combining a series of bosses with the face of said shutter, substantially as set forth.

We also claim giving the metallic bosses upon the face of our improved rolling shutter such a shape that they will prevent the edges of the slats of said shutter from being forcibly separated from each other, substantially as set forth.

No. 28,260.—JOHN DOUGHERTY, of Cold Spring, N. Y.—*Improvement in Moulding*.—Patent dated May 15, 1860.—This invention consists in a novel arrangement of gearing combined with the central spindle carrying the templet, for giving said templet, or templets of any description, according to the kind of work, a vertical reciprocating motion, or a vertical motion combined with a circular motion.

Claim.—The temple block M combined with a hollow shaft B and screw shaft G, and operated substantially in the manner and for the purposes set forth.

No. 28,261.—WILLIAM DOYLE, of Albany, N. Y.—*Improvement in Moulding Iron Pipes*.—Patent dated May 15, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the core bar K, made in sections or with joints S, in combination with a sand mould, when the sections of said bar are constructed with flanches *t t* for supporting the sand, substantially as described.

Second. The arrangement of the bars *pp* of the flask with rings *q q*, and the points L M P, substantially as shown, to admit of the ready adjustment of the same, as set forth.

Third. The employment or use of the stationary screw N and cylinder O, the latter being provided with an internal screw thread and fitted on the former, to operate as and for the purpose set forth.

Fourth. The employment or use, for the purpose specified, of the hollow screw S formed of two longitudinal parts, in connection with the bar Q provided with the annular plate R having an internal screw thread to receive the screw S.

Fifth. The cutter H attached to a cylinder G or other shaped tube corresponding, as well as the cutter H, to the shape of the pipes to be cast, and used in connection with the screw and gearing, or other proper mechanism, for the purpose of forcing the cutter down through the flask concentrically with the core bar K.

Sixth. The guide rod I fitted with the screw D and cylinder or tube G, and provided with a socket *a*, substantially as shown, for the purpose set forth.

No. 28,262.—LOVETT EAMES, of Kalamazoo, Mich.—*Improvement in Automatic Grain Weighing Machines*.—Patent dated May 15, 1860.—A is a standard or frame work for supporting the several parts to effect the automatic weighing and registering of the grain, to the top of which is attached the hopper or garner B, consisting of a box of any suitable capacity, having a double discharging bottom terminating in two side orifices *a a'* through which the grain flows from the bottom of the hopper.

The inventor says: I *claim* the combination of the weighted pendulum lever E with the scale beam F and weighing box D, in the manner and for the purpose substantially as shown and described.

I also claim the combination, in the manner shown and described, of the gate C C with the double discharging bottomed hopper B and oscillating weighing box D, for the purpose set forth.

No. 28,263.—LOUIS ENGLER and ERNEST FREDERIC KRAUSS, of Paris, France.—*Improved Insulator for Electrodes*.—Patent dated May 15, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The insulator, consisting of an enamelled iron ring, having a lining of glass permanently cemented within it and a V-shaped opening *a*, the sides *c c* of whose throat project inwardly beyond the interior of the lining, substantially as described.

No. 28,264.—J. W. EVANS, of Forsyth, Ga.—*Improved Combination of Shovel and Tongs*.—Patent dated May 15, 1860.—When in use as fire tongs the implement is folded up, and when it is desired to bring the shovel into requisition the leg *b* is extended; the latch *g* is turned to one side; the shovel is then free to turn on its pivot *s* and is adjusted into the groove *e*; the leg *b* is then brought down in place; and the groove *e'* fitting the shank, like its fellow, com-

pletely closes it, and the hand of the operator easily and firmly keeps it in place, so that the whole now forms a complete shovel.

Claim—The combination and arrangement of the shank of the shovel *c* with the axis of the leg *a*, the latch *g*, and spring *h*, and the groove *f*, substantially as set forth.

No. 28,265.—EUNICE N. FOOT, of Saratoga Springs, N. Y.—*Improved Filling for Soles of Boots and Shoes*.—Patent dated May 15, 1860.—This improvement relates to the filling of boots and shoes, made in one piece of vulcanized India rubber, pressed by dies or rollers into its proper shape for both the shank and the fore part. It is attached to the sole by rubber cement, and then the bottom is put over it and secured or pegged in the usual manner.

Claim.—The filling of boots and shoes, made and inserted substantially as I have described, and for the purposes set forth.

No. 28,266.—J. FRASER, of Rochester, N. Y.—*Improved Clothes Frame*.—Patent dated May 15, 1860.—The bars *e*, when in an extended position, are capable of moving half a revolution around the standard *A*, by turning on the short arm of the crank pivots *g*, without moving the same in the standard; by placing them in the positions indicated by the dotted lines *jj*, on the plane of the square *c*, they are also capable of a vertical motion, which elevates them to the sides of the central standard.

Claim.—The combination and arrangement of the arms *D* with the standard *A*, by means of the crank pivot *g* or its equivalent, substantially in the manner and for the purposes shown and described.

No. 28,267.—THOMAS FRY, of Brooklyn, N. Y.—*Improvement in Hanging Window Sashes*.—Patent dated May 15, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim, first, arranging that character of window sashes which can be swung into a horizontal or oblique position, in such a manner that the sash, while it turns, is tightened laterally, so as to remain in a horizontal or oblique position, substantially as set forth.

Second. Providing the sash frame, in the manner described, with a spring strip, which has a recess for the reception of the sash when in an oblique position, said strip answering the double purpose of stop and weather strip, substantially as set forth.

No. 28,268.—F. H. FURNISS, of Cleveland, Ohio.—*Improvement in Railroad Jacks*.—Patent dated May 15, 1860.—This invention consists in the construction of a jack, in which the main or lifting screw can be carried sidewise for the purpose of easily replacing a car that has jumped off the track back again upon the rail. In connection therewith is the arrangement of a sleeve, on the outside of the standard and lifting screw, which has an arm at the lower end placed underneath the cars, lying flat on the ground for the purpose of elevating them high enough to place the head of the lifting screw under them.

Claim.—The arrangement of the sleeve *F* with the arm *E* and screw *B* and standard *A*, in combination with the sliding jack frame, when operating conjointly in the manner and for the purpose specified.

No. 28,269.—EMERSON GAYLORD, of Chicopee, Mass.—*Improvement in the Manufacture of Bayonet Scabbards*.—Patent dated May 15, 1860.—The claim explains the nature of this invention.

Claim.—A bayonet scabbard, shaped and finished by the application of moisture, heat, saturation, and pressure, as stated, for the purpose of giving it form, rigidity, and a highly polished surface, and making it impervious to water, as set forth.

No. 28,270.—JAMES GREENHALGH, SR., of Pascoag, R. I.—*Improvement in Harness Frames for Looms*.—Patent dated May 15, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the hollow heddle bars *A A'* and the rods *d d*, inserted within the said bars to secure the loops at the ends of the heddles, substantially as described.

No. 28,271.—JOHN H. HASKELL, of Baltimore, Md.—*Improved Machine for Stretching Leather*.—Patent dated May 15, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim, first, making each of the gripping devices of two or more separate cams *l*, substantially as and for the purposes set forth.

Second. Arranging the cams *l* upon an adjustable bar *m* in such a manner that not only the whole gripping surface can be adjusted for pieces of leather of various thicknesses, but

that each cam *l* can also adjust itself to the varying thickness of one piece of leather, substantially as set forth.

Third. Combining a gripping cam, constructed of separate cams *l*, and of an adjustable bar *m*, with a lever *a* pivotted to the main frame of the machine at *d*, substantially as and for the purposes set forth.

Fourth. The combination of a flanged pawl *v* and a sliding cam *x*, substantially as and for the purpose set forth.

No. 28,272.—CHARLES F. HITCHINGS, of New York, N. Y.—*Improved Boiler for Heating Buildings*.—Patent dated May 15, 1860.—This invention consists in providing an annular water jacketed chamber, connected with water passages to, and enclosing the upper part of, the boiler, forming an annular flue or passage between the outer shell of the boiler and the inner shell of the chamber, through which the flame and heated gases are forced to pass in their escape from the fire chamber to the chimney, by which means, without altering the size or shape of the chamber, nearly double the amount of heating surface is exposed.

The inventor says: I *claim*, first, the water jacketed chamber *B*, in combination with a vertical, cylindrical, or conical boiler, enclosing the flue *D* between the inner shell *f f* of the chamber *B*, and the outer shell *d d* of the boiler *A*, for the purpose and in the manner substantially as set forth.

Second. The diaphragm *C C*, formed by an indentation in the inner shell *f f* of the chamber *B*, or its equivalent, for the purpose set forth.

No. 28,273.—ISAAC H. HOBBS, of Philadelphia, Pa.—*Improvement in Machines for Hoisting Persons, &c., from one Story to Another*.—Patent dated May 15, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The application to a building of any suitable kind of either a single reciprocating frame *A* or *A¹*, or of a pair of such frames, arranged together, substantially as described, the same being actuated by any suitable machinery and motive power, so that the respective platforms *p p* of the said frame or frames may operate in combination with the several respective floors or landings of a building, substantially as described, and for the purpose of conveying persons from any one floor to its next, or successively to any other floors of the said building, substantially in the manner set forth and described.

No. 28,274.—ALFRED G. HOLCOMB, of New York, N. Y.—*Improvement in Telegraphic Instruments*.—Patent dated May 15, 1860.—The object of this invention is to increase the movement of the armature lever by allaying the residual magnetism in the relay magnet after breaking the circuit of the main battery; it also consists in an arrangement for increasing the relative capacity of the electro-magnet.

The inventor says: I *claim*, first, producing an additional movement of the armature lever by reversing the electrical current in the coils of the magnet, substantially as set forth.

Second. The arrangement of the steel cores *i¹* and iron bush cores *l*, in combination with the coils of the electro-magnet.

No. 28,275.—JAMES HOLLAND, of Conshohocken, Pa.—*Improved Post Butt*.—Patent dated May 15, 1860.—The claim and engravings explain the nature of this invention.

Claim.—An earthenware post butt, made substantially as described, so as to receive the bottom of the post entirely within it, as also to a luting of pitch, or its equivalent, between them, and having also a bottom support and protection, as described and represented, and for the purpose specified.

No. 28,276.—RICHARD HUBBARD, of Milton, Ind.—*Improvement in Bedstead Fastenings*.—Patent dated May 15, 1860.—The subject of this improvement is a combination of dovetail mortises and tenons, with metallic bearings and castings of peculiar construction.

Claim.—The described combination of the dovetail mortise *a*, dovetail tenon *b*, metallic lining *C*, and metallic casing *D*, formed with cylindrical ends *d*; the whole being constructed and arranged and operating in the manner and for the purposes explained.

No. 28,277.—DAVID HEUSTIS, of Cold Spring, N. Y.—*Improvement in Moulding Shot and Shells*.—Patent dated May 15, 1860.—This invention consists in the employment, for adjusting the pattern, of a mould board with a central aperture to receive a circular projection on the underside of the pattern, and with a circular flange on one side and a rim on the other, to fit on one side over a rim turned to the end of one of the semi-flasks, and on the other into a flange projecting from the end of the other semi-flask, said rim and flange on the semi-flasks being at the same time so arranged that they serve as guides for the flasks when the same are connected; and it also consists in combining with the flanged end of the lower semi-flask a cross shaped gauge with a half circular recess for the purpose of adjusting the core.

The inventor says: I *claim*, first, the employment, for adjusting the pattern, of a mould board

C, with a central aperture *c*, flange *d*, and rim *d*¹, in combination with the semi-flasks A A¹, constructed and operating substantially in the manner and for the purpose described.

Second. The combination, with the flanged end of the semi-flask A¹, of a cross shaped gauge H, with notches *h*, constructed and operating substantially in the manner and for the purpose specified.

No. 28,278.—CHARLES S. IRWIN, of Madison, Ind.—*Improvement in the Construction of Machinery for Cleaning Starch*.—Patent dated May 15, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The rotating disk brush C, placed on the box or receiver A, in connection with the bed or platform D, also placed on the box or receiver, all being arranged as and for the purpose set forth.

No. 28,279.—ZALMON L. JACOBS, of Hebron, Conn.—*Improvement in Screw Plates*.—Patent dated May 15, 1860.—In using this invention the dies are arranged with any desired pair of their cutting parts facing each other and in line with the screws A A; the plate Q is made to secure said dies in their places, and the screws are turned outward sufficiently to allow the dies to be opened so as to receive the bolt or rod to be operated upon. The screws are then pressed inward so as to press the edges of the bolt, and the plate is made to revolve around the bolt to form the thread thereon.

Claim.—As an improved article of manufacture, a screw plate provided with changeable pivotted dies E, screws A, stock C, pins N, and plate Q, substantially as shown and described.

No. 28,280.—POMEROY JOHNSON, of Whitney's Point, N. Y.—*Improvement in Felling Trees*.—Patent dated May 15, 1860.—This invention consists in the employment of a pole provided with a metal point and having a rope attached which passes through a fixed pulley block, the parts being arranged so that with the aid of a team, or other power, the desired end is attained.

Claim.—The combination of the pole or scantling B, provided with a steel or proper metal point *a*, the fixed pulley block or shieve D and rope C, with animal or other power attached, all being arranged and applied substantially as and for the purpose set forth.

No. 28,281.—M. M. JONES, of Morrisville, N. Y.—*Improvement in Cotton Presses*.—Patent dated May 15, 1860.—In this improvement by the application of power to the lever M the follower will descend with double the velocity that it would with a single thread.

Claim.—The particular arrangement and combination of mechanism described, the same consisting of rods H, rotating nuts C, follower B, bed piece E, lever M, pawl N, springs *o o*, pivot P, stationary roller *i*, the several parts being constructed and arranged relatively as described and for the purposes set forth.

No. 28,282.—WILLIAM KENNISH, of London, England.—*Improved Hydraulic Motor*.—Patent dated May 15, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A diaphragmed snail or other suitably shaped piston C, which has an opening in its face and another one in its back, in combination with a diaphragmed hollow shaft D, which has corresponding openings with those of the piston, substantially as and for the purposes set forth.

No. 28,283.—RICHARD KETCHUM, of South Dansville, N. Y.—*Improvement in Mowing and Reaping Machines*.—Patent dated May 15, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the cross bar K, having supporting rollers *m m*, and vibrating bar or beam C, furnished with rollers *d d*, for operation by the corrugated driving wheel B, all arranged upon the axle A, for actuating the cutter, substantially in the manner and for the purposes set forth.

No. 28,284.—WILLIAM A. KIRBY, of Buffalo, N. Y.—*Improvement in Harvesters*.—Patent dated May 15, 1860.—The claim and engravings explain the nature of this invention.

Claim.—In combination with the rod and lifting wheel, the lever and rod *x*, with their attachments, substantially as described, for the purpose of raising, lowering, and holding the cutters at different heights, as set forth.

No. 28,285.—F. L. LANGLEY, of Troy, N. Y.—*Improved Shoemakers' Float*.—Patent dated May 15, 1860.—This improvement relates to machines for rasping or cleaning pegs from the inside of boots and shoes.

Claim.—Constructing and arranging the several parts of the machine substantially as described, whereby the rasp may remain movable upon its axis, or rigidly fixed thereon, as may be required, for the purposes set forth.

No. 28,286.—JOHN P. LEDY and WILLIAM BOYERS, of Mount Carroll, Ill.—*Improved Apparatus for Breachy Cattle.*—Patent dated May 15, 1860.—This invention consists in providing a metallic sheath A, constructed with suitable hinges B b, so that it can be opened and closed conveniently in order to apply it readily to the knee joints of the fore legs of cattle and horses.

Claim.—The metallic sheath A, in combination with the pad C and clasp D, constructed in the manner and for the purpose specified.

No. 28,287.—GEORGE LITTLE, of New York, N. Y.—*Improvement in Sewing Machines.*—Patent dated May 15, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The adaptation of a cylinder, piston, rod, and valves to, and constituting a part of, a sewing machine, the whole combined, constructed, arranged and operating substantially as set forth.

No. 28,288.—THOMAS J. MAYALL, of Roxbury, Mass.—*Improvement in Machines for Making Rubber Hose.*—Patent dated May 15, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, an organized machine for the formation of spiral rubber or gutta percha hose or tubing, the same consisting essentially of a travelling carriage carrying the fabric of which the hose or tubing is to be formed, and a reversible guide, to which such automatic motions are given as to wind the said fabric in spiral layers upon a suitable mandrel, substantially as set forth.

Second. I claim the combination of the travelling carriage carrying the fabric of which the hose is to be formed, and made to receive a reciprocating rectilinear motion, in any proper manner, with the reversible guide, the two so operating together that the said guide shall be reversed in position as soon as the fabric is wound spirally in one direction upon the mandrel whereby the fabric is fed along, and guided in two opposite directions upon the mandrel, so as to form spiral layers crossing each other, as set forth.

Third. I claim the combination of the travelling carriage carrying the supplying reel and the mandrel upon which the hose is to be wound, as set forth.

No. 28,289.—JOHN MCKELLAR, of Thomaston, Maine.—*Improvement in Beer Powder.*—Patent dated May 15, 1860.—The constituents and proportions of this beer powder are as follows: One pound of hops; eight pounds of wheat flour; one pound of powdered sugar; one pound of rasped or powdered lignum vitæ; three fourths of a pound of tartaric acid; and seven and one half ounces of essence composed of one part of some essential oil, such as that of spruce, and four parts of common alcohol.

Claim.—The said composition or beer powder, made substantially as described.

No. 28,290.—WILLIAM H. McNARY, of Brooklyn, N. Y.—*Improvement in Knitting Machines.*—Patent dated May 15, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the threaded wheel D, with its movable switch D¹ H, applied substantially as described, in combination with the needle ring, or other equivalent device, carrying the needles, to produce the rotary or traverse movement of the needles in either direction, as may be necessary.

Second. The revolving and longitudinally moving studded cylinder, applied and combined with the movable switch wheel by means of a forked lever G, and revolving buttons h h¹, or their equivalents, and operating substantially as described, for the purpose of shifting the switch as often as it is desired to reverse the rotary or traverse movement of the needles.

Third. I claim the regulating wheel with its adjustable arms M M¹, applied and operating substantially as described, in combination with the needle ring and with suitable apparatus for throwing the studded cylinder into gear with the main shaft, for the purpose of regulating the length of the complete circular portions of the work.

Fourth. I claim combining the studded cylinder H with the disengaging apparatus, by which it is made to throw itself out of gear with the main shaft when knitting all round the whole series of the needles is required to be resumed after knitting round a portion of the series only.

Fifth. I claim combining the stitch hook bar S², with the main shaft, or other rotary shaft, of the knitting machine, by means of one or more cranks Z Z, and controlling the movement produced by such crank or cranks by means of a slotted arm S¹, working on a fixed guide pin 24, substantially as described, to produce the movement of the stitch hooks to take off the loops from the needles.

Sixth. I claim giving the stitch hook bar the necessary lateral movement to complete the

throwing off of the loops from the needles and to enable them to pass the needles as they descend to take another loop by means of the cams $Z^1 Z^1$, at the sides of the wrists of its driving cranks, substantially as described.

Seventh. I claim combining the rockshaft which carries the thread guides with the switch wheel D, by means of a fork U^4 , or its equivalent, substantially as and for the purpose described.

No. 28,291.—GEORGE MILLARD, of Waterbury, Conn.—*Improved Chimney Cowl*.—Patent dated May 15, 1860.—J J J are three friction rollers, which turn on short shafts fixed to the inside of the vertical portion C^1 of the cowl. These are placed at equal distances apart, and support the cowl on the edge of the flange B. They also allow the cowl to revolve freely, as the vane D is acted upon by the wind. They are protected from the weather by the cowl.

Claim.—The arrangement of the friction rollers J, to run upon the edge of flange B, in combination with the cowl $C C^1$, as and for the purposes shown and described.

No. 28,292.—HARRIS MORSE, of Columbia, Cal.—*Improvement in the Treatment of Snow or Ice to Convert it into Large Blocks*.—Patent dated May 15, 1860.—The inventor says: In carrying out my invention I take snow in its natural state, or ice in small lumps, and put the same in a suitable vessel or receiver, and while therein extract the air from said snow or ice, either by a powerful pressure equal to about seven hundred pounds the square inch exerted upon a piston playing into said vessel, or by an air pump, or suitable mechanical means for exhausting air from the vessel, subsequently producing the requisite compactness or condensation of the mass by a due amount of pressure.

Claim.—The said process of treating snow or small pieces of ice, in order to convert the same into large blocks or masses fit for preservation and use, as described.

No. 28,293.—SAMUEL D. NELSON, of Pittsburgh, Pa.—*Improvement in the Manufacture of Shovels*.—Patent dated May 15, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The shovel, as a new article of manufacture, having the back strap imbedded in the back of the shovel blade, arranged and constructed as described, and for the purpose set forth.

No. 28,294.—DAVID NIVEN, of Rochester, N. Y.—*Improvement in Potato Diggers*.—Patent dated May 15, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim suspending the grate, share, and clearing wheel together upon the axle by the supporting wheels, by means of the bails $h h$, yoke k , and axis of said clearing wheel, as described, or their equivalents, in combination with a lever E, so that the said grate, share, and clearing wheel may be continually graduated by the attendant to any depth, and adjusted to the undulations of the ground or raised therefrom, independently of the movements of the other parts of the machine, as specified.

I also claim forming the upper surface of the circular concentric grate bars l , with serrated edges $m m$, in combination with the intervening teeth $n n$ of the clearing wheel, for the more effectual separation of the tubers from the earth, substantially as set forth.

No. 28,295.—ROBERT F. O'BRIEN, of Boonville, Mo.—*Improvement in the Construction of Flues*.—Patent dated May 15, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The metal base B, formed of the bottom plate a , sides $b b$, and flanches $c c$, applied to the timbers A A, as shown, and perforated at its bottom, or corrugated to receive and hold the plaster or mortar, substantially as and for the purpose set forth.

No. 28,296.—ALANSON ORDWAY, of Stratham, N. H.—*Improved Tuyere*.—Patent dated May 15, 1860.—The blast from the bellows passes into the box A, and is admitted to the fire in a greater or less volume by adjusting the lower grate E, which is done through the medium of the lever F, the two grates C E forming a register, the bars of one grate coinciding more or less with the other, according as the lower grate is adjusted.

Claim.—The combination of the rotating circular grate C, with the horizontal sliding grate E, and levers D F, as and for the purpose described.

No. 28,297.—SIDNEY W. PALMER and JOSIAH F. PALMER, of Auburn, N. Y.—*Improvement in Silk or Thread Reels*.—Patent dated May 15, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Securing the slotted arms of a silk reel to the spindle on which they turn in such a manner that they can be extended and contracted at pleasure, and folded up parallel to each other, and so that they can be rigidly secured to each other and to the spindle in any

desired position, by means of a thumb screw, without preventing the spindle from freely turning in its bearings, substantially in the manner and for the purpose described.

No. 28,298.—JOHN G. PERRY, of South Kingston, R. I.—*Improved Sausage Machine*.—Patent dated May 15, 1860.—In operating this machine the tube F being placed in the aperture R, and the cases placed upon it, motion is given to the cylinder by one hand, and the meat is fed into the machine through the hopper by the other, and being prevented from going round with the cylinder by the proximity of the case upon one side, it is pushed towards the end where it is to be discharged through the tube or nozzle F into the cases placed upon them.

Claim.—The combination of the sliding knives D with the cylinder C, substantially as herein described, and for the purpose set forth.

No. 28,299.—IRA W. PETTIBONE, of Norfolk, Conn.—*Improvement in Vapor Lamps*.—Patent dated May 15, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the combination of the vapor valve at the mixing chamber with the supplementary valve, the two being constructed and operating substantially as set forth.

I also claim the combination of the mixing chamber, with an air tube or tubes, to deaden the whistling noise which generally accompanies such burners.

I also claim arranging the air tube in such a manner, with reference to the mixing chamber of the vapor burner, that it can be removed therefrom to permit cleaning, substantially as herein set forth.

No. 28,300.—GEORGE B. PHILLIPS, of Newark, N. J.—*Improved Wrench*.—Patent dated May 15, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A curved bar provided with a rack of teeth, in combination with a scroll nut for traversing and holding the sliding jaw, as described for the purpose specified.

No. 28,301.—W. C. PITTS, of Austin, Texas.—*Improvement in Seed Planters*.—Patent dated May 15, 1860.—The guano, or other fertilizer, sown with the seed, is placed in the front hopper *e*, and as the distance is less from this hopper to the planting point, and more direct than that from the other or seed hopper *f*, the fertilizer reaches the furrow first, and hence the seed is dropped upon the fertilizer.

Claim.—The arrangement of the double hoppers *e f*, double tubes or ducts B C, and single seed slide *d*, operating together in the manner and for the purpose set forth and described.

No. 28,302.—JOSIAH S. POND, of Cleveland, Ohio.—*Improved Washing Machine*.—Patent dated May 15, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the construction and arrangement of a compound rubbing board, having a series of alternate ridges and rollers, to compress and rub at the same time, as described, for the purposes specified.

Second. The compound rubbing board in combination with a fluted roller, or its equivalent, as set forth.

No. 28,303.—J. T. PRICE, of Rockville, Ind.—*Improved Sediment Collector for Steam Boilers*.—Patent dated May 15, 1860.—This invention consists in a novel system of pipes applied to a boiler, in connection with a water heater arranged as a bridge in rear of the fire grate, for the purpose of collecting the mineral or other sedimentary matter from the water, and preventing its deposit in the boiler.

Claim.—The system of pipes F G I, applied to a boiler in connection with a heater D—the whole arranged substantially as described, for the purpose set forth.

No. 28,304.—THOMAS J. PRICE, of Industry, Ill.—*Improvement in the Construction of Evaporating Apparatus*.—Patent dated May 15, 1860.—This invention consists in constructing evaporating pans so that a series of dampers may be inserted between the cross partitions; these dampers can be lowered to obstruct the heat, so that the syrup may be boiled to the proper degree for syrup or granulation without any possible chance of scorching or burning.

Claim.—Constructing evaporating pans with a series of dampers D D D D, inserted between the cross partitions B B B B, and operated with a series of levers *i i i i*, substantially as shown, for the purpose specified.

No. 28,305.—A. F. REEDER, of Bloomington, Ill.—*Improvement in Rotary Engines*.—Patent dated May 15, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The engine constructed with a cylinder of the form described, with a partition I, with the induction ports in its abutments, and with a cavity *a* and series of projecting surfaces *t u v v* in and upon its rotating piston head D, substantially as herein described.

No. 28,306.—J. H. ROLLINS, of Wapello, Iowa.—*Improved Vapor Lamp*.—Patent dated May 15, 1860.—The bottom *a* of the chamber E is provided with a flanch *c*, which, when the bottom is screwed into the chamber, projects beyond the latter so that the chains *d* may be attached thereto, the lower ends of the chains being attached to a metallic band H provided with a suitable clasp that will admit of the band being increased or diminished in diameter, and secured at the proper point. This band encompasses a flanch *e* at the upper part of the glass globe I, within which is the burner G.

Claim.—The combination, with the vaporizing chamber E, of the removable flanch screw bottom *a* and globe I, so that the globe will be supported or hung from said bottom, all as and for the purpose shown and described.

No. 28,307.—W. J. SANDERSON and SIDNEY STANTON, of Syracuse, N. Y.—*Improvement in Steam Boiler Feeders*.—Patent dated May 15, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of a discharging valve constructed in the manner stated and connected with the water pump of steam boilers A, solid float B, within the boiler, balanced by a weight without, and the steam whistle G connected with the balancing beam E, as described, when the valve J operates as set forth, to regulate the amount of water in the boiler, and the whole constructed, arranged, and operated in combination, substantially as described.

No. 28,308.—JOHN M. SCRIBNER, of Middleburg, N. Y.—*Improvement in Lathes*.—Patent dated May 15, 1860.—This invention consists in the arrangement and construction of devices to rotate the piano leg, newel post, or article being fluted, and at the same time traverse it towards and from the cutters, so as to cut the flutes.

Claim.—The arrangement of devices, as described, for traversing the leg or article cut to and from the cutter, and rotating it at the same time by the mechanism described, or its equivalent, so as to cut or form curves on the article so turned and traversed, substantially as described.

No. 28,309.—PHILANDER SHAW, of Boston, Mass.—*Improvement in the Method of Preparing and Moulding Wood into Different Forms*.—Patent dated May 15, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the method or process of treating wood, consisting in compressing it within moulds and afterwards heating it while thus continued under pressure.

Also, the process of treating wood by impregnating it with steam and resinous, oily, or other water proof matter, and mineral or metallic salts and preservative chemicals and dyes, or any of these or their substantial equivalents, prior to and in combination with the process above claimed.

No. 28,310.—MARVIN SMITH, of New Haven, Conn.—*Improved Peach Parer*.—Patent dated May 15, 1860.—The two forks D and F have each two diverging prongs, the inner edges of which are made sharp, and designed to indent or cut the ends of the peach stone, to prevent the peach stone from slipping from between the forks while it is pared.

Claim.—The combination, with the stationary hollow concave rail B, standard *a*, and fork D, of the sliding hollow concave rail E, standard *d*, fork F, and spring *o*, as and for the purpose shown and described.

No. 28,311.—SAMUEL J. SMITH, of New York, N. Y.—*Improved Nut Cracker*.—Patent dated May 15, 1860.—This invention consists in the employment of a cam lever that is actuated upon by a coiled spring, arranged in such a relation to a curved fixed jaw, and operated by a lever having an eccentric motion, that two jaws will be obtained, one a curved and the other a straight one.

Claim.—The combination of the fixed and curved portion *a*, lever B, constructed as set forth, with its spring D and the eccentric hand lever C, all relatively arranged and combined as and for the purposes described and represented.

No. 28,312.—LYDIA W. STILES, of Brooklyn, Ohio.—*Improved Butter Worker*.—Patent dated May 15, 1860.—This improvement relates to a special arrangement of a bowl and workers, which are jointed or hinged to a movable standard, so as to allow these workers to be moved in any desired direction in the bowl, by means of which dough may be kneaded or butter worked.

Claim.—The special arrangement of the workers B B¹, hinged to the adjustable post E, in combination with the revolving bowl, when operating conjointly in the manner and for the purpose set forth.

No. 28,313.—ABRAHAM STOLER and SAMUEL A. SISSON, of Bristol, Pa.—*Improvement in Harvesters*.—Patent dated May 15, 1860.—In depressing the long arm of the lever K, the upright

lever L is thrown backward and the rod M made to draw up the point of the shoe, thereby raising the point of the guards, rendering them less liable to catch in grass or other occurring obstruction.

The inventors say: We *claim* the arrangement of the castor wheel H, with its frame G, connected to the main axle, in combination with the levers K and L, fulcrum I, rod M, and shoe S, applied in the manner and for the purpose substantially as described.

We also claim the combination and arrangement of the rod M and levers interposed between the castor wheel frame and pivotted shoe S, for adjusting the cutting apparatus, substantially as described.

No. 28,314.—A. M. SWAIN, of Lowell, Mass.—*Improvement in Water Wheels*.—Patent dated May 15, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the annular chamber I, arranged substantially as shown, and provided with slots to receive the guides *e*, when the latter are attached to the cylinder J, for the purpose set forth.

Second. The arrangement of the guides *e* and cylinder J, attached to curb B, and chamber I, forming the gate, when said parts are arranged in relation to the wheel G, substantially as and for the purposes specified.

Third. The adjusting of the block E by means of the bar *b* and set screws *c*, for the purpose of adjusting the wheel to compensate for the wear of the step.

No. 28,315.—RICHARD A. TILGHMAN, of Philadelphia, Pa.—*Improvement in the Method of Decomposing Fats into Fatty Acids*.—Patent dated May 15, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the process of decomposing fats into fatty acids and glycerine, by means of water at a high temperature and pressure, either with or without the presence of an alkali.

1. Applying the water in several successive portions, and removing those portions when partly saturated with glycerine.

2. Arranging the fat and water in shallow layers, so as to give an increased surface of permanent contact between them.

3. Causing the fat and water arranged in shallow layers to flow in opposite directions, so as to bring fresh water in contact with the partly decomposed fat.

No. 28,316.—JEREMIAH TILTON, of Northfield, and EDWIN RITSON, of Sanbornton, N. H.—*Improvement in Machinery for Cutting Flock*.—Patent dated May 15, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The employment or use in a flock cutting machine of two cutters H J, arranged substantially as shown, so that one cutter H will have a rotary motion and a vertical adjusting movement, and the other cutter J an universal self-adjusting movement, for the purposes set forth.

No. 28,317.—MAURICE VERGNES, of New York, N. Y.—*Improvement in the Construction of Voltaic Gas Burners*.—Patent dated May 15, 1860.—This invention is an improvement on the Bunsen and Grove galvanic batteries, and consists of a novel arrangement of the parts and a new mode of building up or composing the battery, which has three cells and three decomposing and decomposable departments.

The inventor says: I *claim* the use, in gas batteries or combined acid and gas batteries, of porous platinized coke, substantially as and for the purposes set forth.

I also claim the general arrangement of the whole battery or apparatus, substantially as described.

No. 28,318.—JOHN H. WAIT, of Portsmouth, Ohio.—*Improvement in Mechanical Movement*.—Patent dated May 15, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Constructing a crank with an elongated wrist pin set obliquely to its axis of rotation, so that a pitman connected thereto can be made to give any desired length of stroke or throw within the capacity of the crank, without retarding the motion thereof, in the manner substantially as described.

No. 28,319.—C. P. S. WARDWELL, of Lake Village, N. H.—*Improved Swift*.—Patent dated May 15, 1860; antedated April 25, 1860.—This invention consists in constructing swifts with a jaw and a compensating spring in such a manner that they can be readily attached to the edge of a table, or other suitable place, and held firmly in place regardless of the thickness of the table, and readily adjusted for skeins of various lengths.

Claim.—The spring D, in combination with the jaw formed by lips B B, substantially as set forth and represented.

No. 28,320.—C. O. WEST, J. R. SMITH, JOHN CAREY, GEORGE JANNEY, R. HUNT, AMOS HOCKETT, D. WEST, ELIEL WEST, and J. GARNER, of Martinsville, Ohio.—*Improvement in Ditching Machines*.—Patent dated May 15, 1860.—This machine is intended for forming ditches of any width or depth, having either vertical or inclined sides. The machine can be used for digging ditches around farms, for draining water, irrigating land, forming roads, &c.

The inventors say: We *claim*, first, the employment of the fin M, in combination with the inclined bottom L, as and for the purpose shown and described.

Second. The combination of the rib e^1 , with the inclined bottom B, as and for the purpose set forth.

Third. The employment of a hinged triangular beam A, and adjustable sled F, in combination with the plough, as and for the purpose shown and described.

Fourth. The combination with the plough, the beam A, and sled F, of the adjustable pivotted brace rod K, standard I, and front brace rod J, as and for the purposes shown and described.

No. 28,321.—J. W. WETMORE, of Erie, Pa.—*Improvement in Railroad Chairs*.—Patent dated May 15, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the lip chair E, formed for a longitudinal wedge under the rails and fitting them exactly, because of the trimming of the web $u u$, the upper surface of the base of the chair being bevelled at each end $w v w v$.

Second. The wedge G, passing between all the spikes except one I, and held in place under the joint by notches h , catching the spike R.

No. 28,322.—JOSIAH M. WHITNEY, of Astoria, N. Y.—*Improved Sash Fastener*.—Patent dated May 15, 1860.—The inventor says: The dog E can be turned up and down under all circumstances and at all times with equal facility; it secures the brace C in such a manner that the window cannot be opened from the outside without breaking some portion of the same.

Claim.—As an improved article of manufacture, a window sash fastener composed of a plate a , hinged noose strut C, and a hinged dog E, arranged as shown.

No. 26,323.—DUDLEY WOOD and ALBERT BYINGTON, of Byron, Ill.—*Improvement in Ploughs*.—Patent dated May 15, 1860.—This invention consists in the arrangement of the devices named in the claim and shown in the engravings.

Claim.—The arrangement of the tubular beam A, tubular standard B, secondary joint b , and inside coupling bolts $a a$, substantially as described.

No. 28,324.—CHARLES W. BROWN and GEORGE W. BANKER, of Boston, Mass., assignors to GEORGE W. BANKER and GEORGE O. CARPENTER, of South Reading, Mass.—*Improvement in Machines for Mixing Paint*.—Patent dated May 15, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The method of constructing and arranging the mixing apparatus in such way that the fixed arms in the tub shall be set so as to describe scrolls from the central tube, or centre of the tub, and arranged in such a relation to the parallel revolving arms that they will pass each other only in pairs, at nearly equal distances from the axis of the spindle, in the manner described and represented, for the purpose set forth.

No. 28,325.—PATRICK MIHAN, of Boston, Mass., assignor to himself and MAJOR A. LANE, of Charlestown, Mass.—*Improvement in the Construction of Condensers of Stills*.—Patent dated May 15, 1860.—This invention consists in combining an annular steam chamber surrounding a vessel that contains cold water, and the elevated conical bottom of said vessel, with a conical receiving chamber in such a manner that if said vessel is placed on a kettle containing boiling water, the steam arising from the latter by coming in contact with the conical bottom and with the cold walls of the steam chamber, condenses and collects in the conical receiving chamber, from which it is drawn by a suitable faucet.

Claim.—The combination of a conical mouth piece F of the supply pipe E, with the conical bottom b of the reservoir C, substantially as and for the purpose specified.

No. 28,326.—PURCHIS MILES, of New Haven, Conn., assignor to A. P. PLANT, of Plantsville, Conn.—*Improved Bedstead Fastening*.—Patent dated May 15, 1860.—This invention consists in the use of a shaft provided with an eccentric, on the prominent part of which a spiral flanch is formed, in connection with a dovetail tenon and mortise, arranged to effect the desired end.

Claim.—The arrangement of the shaft c , provided with eccentric a^1 , spiral flanches b^1 , the dovetail mortise a , tenon b , and female screw thread d^1 , with the bracket bearing C, substantially as and for the purpose set forth.

No. 28,327.—JAMES H. PARKER, of Boston, Mass., assignor to E. H. ASHCROFT, of said Boston.—*Improved Hand Drill*.—Patent dated May 15, 1860.—The inventor says: By arranging the clutch with respect to the drill carrier A and lever C, and covering the clutch, the screw G, and the shank I, by the tubular sleeve or cap L, I am enabled to protect from dust, chips, &c., the working surfaces of the clutch, the screws, and all parts to which it is necessary to apply oil, and the teeth of the clutch are covered so as to be protected from injury.

Claim.—The arrangement of the spring clutch with the drill carrier and its lever, and within, so as to be protected by, the sleeve or cap L, substantially as specified.

No. 28,328.—JAMES H. PARKER, of Boston, Mass., assignor to E. H. ASHCROFT, of said Boston.—*Improved Hand Drill*.—Patent dated May 15, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* my improved hand drill, as constructed, not only with the application of a male screw G, and a concentric oil holder or tubular cap L, directly to, and so as to project from the drill carrier A, but with the tubular shank of the female screw extended directly from the pivot F, or a handle K, intervening between the two, as described.

I also claim connecting the chambers M N, by one or more passages *b*, separate from the female screw, that the oil may pass from one chamber into the other, under circumstances and for the purpose set forth.

No. 28,329.—WILLIAM C. PITTS, of Austin, Texas, assignor to WILLIAM A. PITTS, of said Austin.—*Improvement in Ploughs*.—Patent dated May 15, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the construction of the plough with double points with the hole in the centre, so that either end may be turned to the ground and fastened to the stock or "helve" of the same, by the bolt through the hole in the centre, so that when one point wears out or breaks off, the other can be turned down; also, the separate bar, so constructed as to fit and sustain the plough, as specified.

And I hereby disclaim the invention of the stock of said plough, and claim only the invention of the share and bar, as specified.

No. 28,330.—EPHRAIM RUSSELL, of Coatsville, Pa., assignor to himself and JAMES S. WILEY, of Sadsbury, Pa.—*Improvement in Seed Planters*.—Patent dated May 15, 1860.—

This invention consists in the use of an equal armed horizontally vibrating lever, or its equivalent, connected to slides and operated by an armed cylinder on the axle of the machine; and also in the use in the machine of double dovetail keys in lieu of the screw bolts and nuts heretofore used for the purpose of holding certain parts of the machine together.

Claim.—The arrangement of the slides $D^1 D^2$, the equivalent lever, the armed cylinder F, screw stems $m m^1$, slotted plates or loops $n n$, and the double dovetail keys $G G G^1 G^1 G^2$, operating in the manner described and for the purpose specified.

No. 28,331.—EDWARD SAVAGE, of Cromwell, and HENRY SAVAGE NORTH, of Middletown, Conn., assignors to the SAVAGE REVOLVING FIRE ARMS COMPANY, of said Middletown.—*Improvement in Revolving Fire Arms*.—Patent dated May 15, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim*, first, placing the coiled spring which forces back the rotating cylinder away from the muzzles of the charge chamber, and covering it with the shoulder *b*, of the cylinder axis pin, so that its action cannot be clogged by the accumulation of smoke, burned powder, or dust from the muzzles when fired; and also increasing the facility with which the rammer can be put in and taken out, all as shown and described.

Second. The employment, in combination with the regulating screw G, of a thimble or bushing E, applied to the recoil shield, to serve, at the same time, as a bearing for the rear end of the cylinder axis pin D, and a bearing for a set screw *f*, by which to secure the regulating screw, substantially as described.

Third. The set screw *f*, applied in combination with the thimble or bushing E, of the recoil shield, and with the regulating screw G, substantially as and for the purpose described.

Fourth. The combination, with the plunger I, fitted to a guide in the head of the cylinder axis pin D, as described, of the lever J, fitted to the slots *i* and *j* of the said head, and to a slot *m*, in the plunger, and connected with the said head by a fulcrum pin *k*, and with the plunger by a cam-like slot *b*, and pin *p*, substantially as specified.

No. 28,332.—WILLIAM SHIELDS, of Manchester, England, assignor to JOSEPH LOCKETT and ROBERT LEAKE, of said Manchester.—*Improvement in Machines for Engraving Rollers, &c.*—Patent dated May 15, 1860; patented in England, October 30, 1857.—This invention refers to those machines in which a tracer is used to be placed over the design to be copied

and transferred upon a roller, or cylinder, the motions of the tracer being followed by the cylinder and an etching instrument, or series of etching instruments.

The inventor says: I *claim* the combination and arrangement of the mechanism described, by which the movements of a tracer can be modified in extent and changed in direction and transmitted to etching instruments, and the roller or cylinder to be operated upon; and I particularly claim for these purposes the use of the levers or bars e^9 and h^4 , and the bars or carriages $e^1 f$ and g^6 .

No. 28,333.—EMIL TRITTIN, of Philadelphia, Pa., assignor to himself and J. A. CUMMINGS, of said Philadelphia.—*Improvement in Burners for Vapor Lamps*.—Patent dated May 15, 1860.—This invention consists of a device for increasing or diminishing the extent of the flame at pleasure.

The inventor says: I *claim*, first, the tube A, with its chamber C, and slotted top a , in combination with the stem D, and the attachment E, or its equivalent; the whole being arranged substantially as and for the purpose set forth.

Second. The cap d , with its openings, having inclined sides v , in combination with the slotted top a of the burner; the whole being arranged and operating substantially as specified.

No. 28,334.—JEDEDIAH WEISS, of Bethlehem, Pa., assignor to himself and CHARLES BRODHEAD, of said Bethlehem.—*Improvement in Telegraphic Machines*.—Patent dated May 15, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The application of clock work to the drawing out and letting back of the spiral spring, circular spring, or elastic substance, commonly used for adjusting the telegraphic circuit, by combining with the clock work the eccentric C C C, the lever A A, and roller L, the movable axis to the wheel S, the sliding wedge shaped knob K, and the lever O O, in the manner and with the effect set forth particularly in the foregoing specification and the annexed drawings.

No. 28,335.—DAVID H. WILLIAMS, of Allegheny, Pa., assignor to himself and R. B. FITTS, of Philadelphia, Pa.—*Improved Apparatus for the Combustion of Smoke in Steam Boiler Furnaces*.—Patent dated May 15, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The use of steam under pressure, for the purpose of forcing air, through suitably arranged, conically-shaped tubes or other openings, by means of the steam pipe apparatus, operating substantially as described, into steam boiler furnaces, their hot air chambers, or the flues or tubes of the boiler, the steam jets H, with their openings K, or their equivalents, being in combination whether with or without the deflecting or heat receiving wall E.

No. 28,336.—THOMAS T. WOODWARD, of South Reading, Mass., assignor to himself and WHITON, BROWNE, and WHEELWRIGHT, of Boston, Mass.—*Improved Signal Apparatus*.—Patent dated May 15, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, a portable revolving signal apparatus, containing a series of pyrotechnic charges, such as blue lights or rockets, &c., and operated so as to receive an intermittent rotary motion, and to successfully ignite the several charges by any suitable arrangement of mechanical devices.

Second. The arrangement of devices for rotating the apparatus and igniting the charges at the same time; the same consisting of the spring hammer and cam grooved cylinder c , both actuated, as described, by the rod.

No. 28,337.—CALVIN ADAMS, of Pittsburgh, Pa.—*Improved Clevis for Ploughs*.—Patent dated May 22, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, constructing the loose end piece of the clevis with hooked ends, fitting into suitable slots in the shanks, for the purpose of forming a connection between the outer extremities of the shanks, and at the same time sustaining the end piece in its proper position, without any bolt or other fastening for that purpose.

Second. Combining with a plough clevis, constructed as described, a projection, or lug on one of the shanks, in the manner and for the purpose set forth.

No. 28,338.—DANIEL W. AYRES, of Middleport, Ill.—*Improvement in Grain Binding Machines*.—Patent dated May 22, 1860.—This invention consists in the employment of a rotating arm, stationary gavel receiving box, twisting device, cutter and holder, and fingers or teeth; all arranged in such a manner that the gavels may be bound and the binding wire twisted and cut and secured in proper position for a succeeding operation, all the parts working automatically by the turning of a shaft, and a gavel bound at each revolution of the shaft.

Claim.—The employment or use of the rotating arm D, with the toothed segment E, and rod or bar F attached, in connection with the stationary box G, and twister formed of the

stationary and movable heads *k l*, and the holder and cutter, formed of the lever *K*, provided with cutting and holding teeth *p* and *q*, all being arranged for joint operation, substantially as and for the purpose set forth.

No. 28,339.—GILBERT L. BAILEY, of Portland, Me.—*Improved Ballot Box*.—Patent dated May 22, 1860.—This invention consists in providing a box with a suitable mechanism, which being operated by the hand of the voter, or of the person holding the same, causes the number of votes, "Yes" or "No" to be plainly indicated to the person carrying or holding the box.

The inventor says: I *claim*, first, the employment of dials *O* and *P*, with their numerals and blank space, operating in conjunction, substantially as and for the purpose set forth.

Second. The employment of dials *O* and *P*, as and for the purpose set forth, in combination with the ratchet wheel *L*, pawl *A*, and pull *E*, or their equivalents.

Third. The combination and use of the above claimed dials, ratchet wheel, pawl, and pull, operating as described, with alarm bell *c*, for the purpose set forth.

Fourth. The combination and use of the above claimed dials, ratchet wheel, pawl, and pull, whether with or without alarm bell *c*, with any suitable box, substantially as described.

Fifth. The combination and use of an alarm bell, with a self registering ballot box.

Sixth. The combination and use of two sets of registering mechanism, with one ballot box, operating substantially as and for the purpose set forth.

No. 28,340.—HENRY O. BAKER and JAMES MCGILL, of New York, N. Y.—*Improved Fire Escape*.—Patent dated May 22, 1860.—This invention consists in providing a series of adjustable or stationary stairs, steps, or ladders, with or without single or double folding guards or balusters, in connection with balconies upon the outside of the buildings, to be used as a means of egress or escape from buildings when on fire.

Claim.—The stairs or ladders, the folding guard or their equivalent, in connection with balconies upon the outside of a building, substantially as described, for the purpose specified.

No. 28,341.—JOHN F. BENNETT, of Pittsburgh, Pa.—*Improvement in Apparatus for Condensing Coal Oils*.—Patent dated May 22, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Subjecting the volatile products of the distillation of coal, composed of a mixture of various substances in the form of vapor, directly as it passes from the retort or prime generator, to gradually diminishing degrees of heat in a succession of condensers for the purpose of separating by one operation, each of these several different substances from the other substances with which it is mixed, when in the form of vapor, at the particular degree of temperature at which it assumes the liquid form as distinguished from the fluid or gaseous form, by means of an apparatus such as described, when combined with a coal oil retort.

No. 28,342.—G. W. BILLINGS and W. M. HUTTON, of Cleveland, Ohio.—*Improved Apparatus for Elevating Water from Wells*.—Patent dated May 22, 1860.—This invention relates to a certain arrangement of devices by which the cord or chain used in raising the bucket will be firmly held from slipping between two revolving disks, which disks are caused to hold the rope by a circular revolving wedge.

The inventors say: We *claim* the arrangement of the disks *F F*¹, with the radial slots *G*, and revolving wedge *E*, in combination with the radial arms or lugs *H*, shaft *B*, and rope *D*, the whole being constructed, substantially as set forth, for the purpose described.

We also claim the sliding draws *P P*¹, hooks *N N*¹, and loops *M M*¹, when specially arranged as described, and operating conjointly in combination with a windlass and buckets, in the manner and for the purpose set forth.

No. 28,343.—J. H. BONHAM, of Elizabethtown, Ohio.—*Improvement in Corn Planters*.—Patent dated May 22, 1860.—*E* is a pulley attached to the axle for the purpose of rotating the seed reservoir *C*, with its rings and caps by the cord *G*; *n* is a drop hammer which falls on the cavities to loosen any grain that may be held fast; *m* is a flange with holes in it, attached to the side of the hopper *B*.

The inventor says: I *claim* the seed reservoir *C*, in combination with the hooper *B*, operated by the driving wheel *E*, in the manner and for the purpose set forth.

I also claim the combination of the pivotted hopper *B*, perforated flange *m*, hook *r*, brush *h*, and ring *k*, constructed, arranged, and operating substantially as and for the purpose set forth.

No. 28,344.—JOHN BROUGHTON, of New York, N. Y.—*Improvement in Dress for Mill Stones*.—Patent dated May 22, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The employment or use of the peculiar zigzag form of teeth, so cut or constructed on the grinding surfaces that while the working edges or meal producing line shall present an obstruction to the discharge of unground portions of the substances passing through the mill, the furrows shall be clear and unobstructed, for the free passage of air and the proper ventilation of the grinding surfaces, substantially as set forth.

No. 28,345.—CHARLES W. BROWN, of Boston, Mass.—*Improvement in Rotary Cutting Shears.*—Patent dated May 22, 1860.—This invention has for its object the cutting or shearing of India rubber cloth into narrow strips by a new and improved system of rotary shears, which are constructed and arranged upon suitable shafts in such a manner that they will be brought in contact only at their cutting edges, or so that the points of contact of the shears will be the cutting points.

Claim.—The annular shear plates, when formed and arranged essentially as and for the purposes described, so that their cutting edges will always be kept in perfect contact, and so as by their elasticity to correct any variations in their thickness, resulting from imperfect workmanship or other causes.

No. 28,346.—WILLIAM R. CARNES, of Roxbury, Mass.—*Improved Flush Bolt.*—Patent dated May 22, 1860.—This invention consists of a door fastening in which a single spring catch or bolt is employed to secure the door when closed, which bolt, of itself, forms the face of the fastening, and is so shaped at its end that it may spring in and out of the striker when one door is opened or closed, and so arranged that when the other door is closed its edge shall rest against the bolt and prevent it from being withdrawn from the striker.

Claim.—The above described flush bolt or door fastening, consisting of a single spring bolt flush with the edge of the door or jamb which is locked by the edge of the other door, as set forth.

No. 28,347.—ALFRED CARSON, of New York, N. Y.—*Improved Fireplace.*—Patent dated May 22, 1860.—The object of this invention is to obviate the difficulty hitherto attending open grates or fireplaces for heating apartments, to wit: the escape of a large amount of heat up the chimney or flue, the result being due to the encompassing of the back and sides of the fireplace or grate by the masonry of the chimney and the consequently small area of heat radiating surface exposed, together with the very direct communication of the fire with the chimney or flue.

Claim.—The arrangement of the inclined grate I, fireplace C, feeder G, hearth plate H, and cold air passage j, with or without the air heating passage E, substantially as and for the purpose set forth.

No. 28,348.—F. Y. CLARK, of Savannah, Ga.—*Improvement in Moulds for Metal Dies used by Dentists.*—Patent dated May 22, 1860.—This invention consists in an improved construction of the impression cup, and in a new system of flasks employed in combination with the impression cup, and the impression taken directly from the mouth, the whole constituting a complete mould possessing the requisite qualities.

The inventor says: I *claim*, first, the impression cup, perforated, substantially as described, for the purposes specified.

Second. The combination of the perforated cup C, the impression obtained directly from the mouth, and the two flasks A and B B, constructed substantially as described, the whole constituting a mould for casting the die, of which the impression taken directly from the mouth forms a part, as specified.

No. 28,349.—A. C. CLEMENS, of Crain Township, Ohio.—*Improvement in Apparatus for Evaporating Saccharine Juices.*—Patent dated May 22, 1860.—This invention consists in an improved construction and arrangement of the fire box and smoke pipes, in connection with a peculiar arrangement of the division of the pan.

Claim.—The construction and arrangement of the several fire chambers and the two smoke pipes with the damper I, in combination with the peculiar arrangement of the pan in different divisions, at variable heights, substantially as set forth, for the purposes described.

No. 28,350.—JOSEPH H. CLIFTON, of New Castle, Pa.—*Improvement in Bands for Machinery.*—Patent dated May 22, 1860.—The claim explains the nature of this invention.

Claim.—A band, the warps of which are of animal fibre, and the wefts, of either animal or vegetable fibre, impregnated or coated with pliable cement.

No. 28,351.—L. O. COLVIN, of Cincinnati, Ohio.—*Improvement in Cow Milkers.*—Patent dated May 22, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement of the adjustable elastic tube D between the tubes E C, as and for the purpose shown and described.

Second. The attaching of the tubes C of the teat tubes to the pump cylinder b, by means of the balls q, sockets p, and elastic tubes r, for the purpose set forth.

Third. The employment, in combination with the milk pail, of a pump provided with double pistons and double brakes, or lever, that move in opposite directions, so that the force required to move one of the brakes and pistons in one direction will be counterbalanced or equalized by the force applied to move the opposite piston and brake, thus preventing the pail and apparatus from being capsized or displaced by the act of pumping, and also producing a quick vacuum within the pump, all as shown and described.

No. 28,352.—WILLIAM COMPTON, of New York, N. Y.—*Improved Pianoforte Action*.—Patent dated May 22, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the repeating finger k, when placed diagonally to the fly of the jack and taking the butt g of the hammer beneath the centre on which said hammer moves, for the purposes and as specified.

Second. I claim the twining pin 8, combined with the spring in the jack of a piano, for regulating the power of such spring, as specified.

Third. I claim the regulating top screw 5, to adjust the elastic material that takes the side of the fly jack c, for the purposes set forth.

Fourth. I claim the regulating button 4 only when formed on and adjusted by a screw that passes through the base of the jack fly c, whereby the said button is drawn out with the key and is not in the way of the check l in removing the key, as specified.

Fifth. I claim controlling the action of the repeating parts of pianoforte actions by means of the hammer rail e that takes said parts and determines their position relatively with the hammer itself, as set forth.

No. 28,353.—G. W. DAVIS, of Brooklyn, N. Y.—*Improved Arrangement of Counter Shaft*.—Patent dated May 22, 1860.—This invention relates to an arrangement of counter shaft, or intermediate shaft and pulley, or pulleys, between a driving shaft and a shaft to be driven by it, whereby the belts running from the driving shaft to the intermediate shaft and to the shaft to be driven are both kept at a uniform tension, notwithstanding any expansion and contraction of the belts or any untrue wear or settling of the driving shaft or machinery, and whereby provision is afforded for regulating the tension of the said belts according to the amount of power required to be transmitted, and for letting them slack when the transmission of power is desired to be suspended.

The inventor says: I *claim*, first, the yielding counter shaft or intermediate shaft D suspended upon and attached to the carriage, as described, and in relation to the shafts B and C, as set forth.

Second. The lever S in combination with the gate F and the weight P, substantially as and for the purpose specified.

No. 28,354.—G. W. DAVIS, of New Orleans, La.—*Improvement in Ice Cream Freezers*.—Patent dated May 22, 1860.—In the interior of the cylinder b is the frame K which agitates the cream as the cylinder revolves; this frame has a pintle at its base for its centre in the cylinder, and is joined to the pipe S at its upper end, which has a cap r, made conical, over which the cream flows, and is discharged near the circumference or body of the cylinder, to be in proximity to the ice.

Claim.—The vessel P, pump V, pipes X and S, in combination with cylinder b, when arranged and operated as, or substantially as, and for the purpose set forth.

No. 28,355.—A. E. DORY, of North Henderson, Ill.—*Improvement in Seeding Machines*.—Patent dated May 22, 1860.—To the under side of the machine, below each seed box D, there are attached plates H, one under each hopper; the front parts of these plates are straight, but the back parts are curved inwards, or towards the seat G; these parts are secured at their inner sides of the discharge openings h, which are in the boards i below the lower parts b of the slide bar E; the plates H have an edgewise position, and their front parts are curved, serving as cutters or coulters, while their curved back ends form the furrows.

Claim.—The arrangement of the double-acting plates H, openings h, boards i, slide bars E, boxes D, levers F, rollers B, and scrapers I, all as and for the purpose shown and described.

No. 28,356.—CAROLUS DUNHAM, of New Haven, Conn.—*Improvement in Potato Diggers*.—Patent dated May 22, 1860.—This invention consists in so constructing the machine by the combination of cog wheels, cranks, spring planes, inclined planes, and levers, attached to a two wheel vehicle, with a shoe or shovel beam plough and a common rake, as to raise the

potatoes, or other circular vegetable, upon an apron with slats or rods attached, by the motion of the rake to clear the vegetables from the earth, leaving them on the surface.

Claim.—The rake 6, operated as described, the plane 13, spring inclined plane 14, in combination with the plough and plough box having closed sides and open bottom, substantially as described and for the purpose set forth above.

No. 28,357.—DAVID ELDRED, of Monmouth, Ill.—*Improvement in Seeding Machines.*—Patent dated May 22, 1860.—This invention consists in the use of an adjustable scattering board attached to the seed box, and so arranged relatively therewith that the distribution of the seed may be stopped whenever desired, without throwing the working parts of the distributing device out of gear with the driving wheel. It further consists in a means employed for retaining the seed in proper position within the seed box, so that the distribution of the seed will not be affected by the inclination of the machine in moving over inclined ground.

The inventor says: I *claim* the employment or use of the tubes or seed receptacles *a*, when attached to the peripheries of the wheels E, and provided with adjustable yielding or elastic stoppers *b*, arranged as and for the purposes set forth.

I also claim the adjustable or hinged scattering board F, attached to the seed box C, as and for the purpose specified.

I further claim the double inclined partitions *c c*, in the seed box C, arranged relatively with the seed distributing wheels E, for the purpose set forth.

No. 28,358.—WALTER FITZGERALD, of Boston, Mass.—*Improved Pegging Machine Jack.*—Patent dated May 22, 1860.—This invention is an improvement upon the means shown in United States patent No. 18,879, for feeding the shoe to the action of the pegging mechanism. Its object is to simplify and cheapen the means now in use for feeding the boot, or shoe, so as to present at regular spaces new portions of the sole to the action of the awl and peg driver.

Claim.—The combination and arrangement, in a pegging machine, of the friction feed rolls *j* and *d*, with the plate *o*, which carries the shoe, and the guide gauge *q*; all operating together, substantially as set forth.

No. 28,359.—ANDREW A. GARVER, of Mechanicsburg, Pa.—*Improvement in Digging Machines.*—Patent dated May 22, 1860.—This invention consists in the combination, with a cylinder, or roller, of spades so hung in said cylinder as to be capable of being vibrated as the roller revolves to relieve them in their operation; also in the combination with a cylinder having vibrating spades of a detachable connection, which connects the cylinder and the traction wheels by which the machine is made capable of acting as a pulverizer at the same time by its action scattering the earth in various directions.

The inventor says: I *claim*, first, the combination, with the cylinder 5, of the spades 6, so arranged, in connection with the other parts as to have a torsional vibration, as described, for the purposes set forth.

Second. The combination of the cylinder 5, and the torsionally vibrating spades 6, with the traction wheels 11 and 12, or one of them, by means of detachable gearing, substantially as and for the purposes stated.

No. 28,360.—GEORGE W. GERAU, of Brooklyn, N. Y.—*Improvement in Mainsails of Fore-and-Aft Vessels.*—Patent dated May 22, 1860.—The object of this invention is to simplify and lighten the fore and aft rig still further than by United States patent No. 15,420, and at the same time obviate the necessity of furling aloft.

Claim.—The combination, with the lower mast and topmast, of the sail A, and halyards E F, as and for the purpose shown and described.

No. 28,361.—JOHN GILMORE, of New Orleans, La.—*Improvement in Machines for Cleaning Cotton.*—Patent dated May 22, 1860.—Immediately below the perforated part *g* of the shell, a slide G is placed, said slide forming the bottom of a box H. The slide G is inclined corresponding to the inclination of the lower part *g*. The slide is within the compartment *b*, and this compartment is provided with a door.

The inventor says: I *claim* the arrangement and combination of the feed box H, and slide G, between the picker B and the compartment *b*, as and for the purpose shown and described.

I also claim the combination of the chute *m*, with the slotted bottomed spout I, as and for the purpose shown and described.

No. 28,362.—J. H. GLOVER, of Glasgow, Ky.—*Improvement in Hanging Mill Stones.*—Patent dated May 22, 1860.—A is an upper mill stone, or runner; B the lower, or bed stone, which is stationary; C is the spindle, the collar *a* of which is fitted in the bush D at the centre of the bed stone B; E is a conical shell which has a cylindrical apex, or head *d*, in the under side of which a square opening *e* is made to receive the upper part *f* of the spindle C, which is also square and smaller in diameter than the opening.

Claim.—The employment of the adjustable conical shell E, when arranged and constructed as shown, in combination with the stones A B, as and for the purposes set forth and described.

No. 28,363.—JOSEPH F. HALL, of Bangor, Maine.—*Improved Curtain Fixture.*—Patent dated May 22, 1860.—This invention consists in the combination of the bracket and spring in one piece of mechanism; the bracket, while sustaining one end of the curtain roller, at the same time acts as a spring pressing the roller against the bracket at the opposite end of the roller, thus creating a friction bearing, whereby the curtain is sustained in any desired position.

Claim.—The spring bracket E, substantially as described, for the purposes set forth.

No. 28,364.—SAMUEL HALL, of Boston, Mass.—*Improved Attachment of Yards to Topmasts.*—Patent dated May 22, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Attaching the yard to the topmast by means of the swiveling shaft *b*, the axis of which passes through the yard, and both the standard *e* and brace *g* of the swinging crane, in the position and manner substantially as described.

No. 28,365.—ASA HAPGOOD, of Worcester, Mass.—*Improved Ventilator for Railroad Cars.*—Patent dated May 22, 1860.—The object of this invention is to produce a simple and efficient ventilator for introducing fresh air into railroad cars, and for separating the dust from the air before the air is admitted into the car.

Claim.—The described ventilator, consisting of the box A, hood B, wheel D, and water box C, arranged and operating in the manner described, for the purpose specified.

No. 28,366.—WILLIAM H. HARN, of Carlisle, Pa.—*Improvement in Preserve Cans.*—Patent dated May 22, 1860.—The claim and engravings explain the nature of this invention.

Claim.—In disks for closing the openings in preserve jars or cans, or other vessels, making the inside disk in two parts or pieces, substantially as described, so that it may be readily passed into or through the opening to be closed.

No. 28,367.—ABIEL HAYES and JAMES VANCUREN, of Chenoa, Ill.—*Improvement in Corn Planters.*—Patent dated May 22, 1860.—This invention consists in constructing and arranging the parts of the machine named in the claim.

Claim.—The arrangement of the slides D D, provided with cutters *a a*, with seed openings *d* in their rear, and with coverers H H, when the same are used in connection with the frame A, seed boxes J J, seed slide *e*, treadle F, and lever I, substantially in the manner and for the purpose specified.

No. 28,368.—ELIJAH HARRIS, of Princeton, Ill.—*Improvement in Spade Ploughs.*—Patent dated May 22, 1860.—This invention consists in making a spade plough supported and driven by driving wheels, causing the cylinder furnished with spades in spiral rows to revolve with sufficient velocity to thoroughly cut and turn over the soil at any reasonable depth.

Claim.—The arrangement of the cylinder J, in combination with spades K¹ K¹, pivots L L, pinions M M, master or driving wheels D D, arms G G, slotted guide N, scrapers O O, and rod P, with a cord attached to it, substantially as shown and described.

No. 28,369.—WILLIAM H. HENDERSON, of Franklin, Ind.—*Improved Machine for Making Rain Troughs.*—Patent dated May 22, 1860.—This invention consists in constructing and arranging the different parts of the machine.

The inventor says: I *claim*, first, the employment of the box A and the curved metallic braces and supporters B B, when the same are used substantially as and for the purpose specified.

Second. In connection with the box A, the employment of the levers C C C, screws *d d d*, and nuts E E E, when the same are used for holding the gutter in proper position for soldering the joints and braces in the gutter, substantially as set forth.

No. 28,370.—MARTIN A. HOWELL, JR., of Ottawa, Ill.—*Improved Safety Paper.*—Patent dated May 22, 1860.—The claim explains the nature of this invention.

Claim.—The application of metal, in foil or in powder, between the laminæ of thin paper, to designate the character or denomination of each particular bank note or other money security for which my improvement may be applied, substantially as described.

No. 28,371.—SAMUEL HUFFMAN, of Richmond, Va.—*Improvement in Sewing Machines.*—Patent dated May 22, 1860.—The claim and engravings explain the nature of this invention

The inventor says: I *claim*, first, the reciprocating shuttle N, when so constructed that its bobbin shall revolve upon an axis perpendicular to the plane of its motion, and when one side is closed, in combination with an adjustable yielding pressure upon the thread after it has passed from the bobbin, as specified.

Second. Making the shuttle race adjustable in its depth, substantially in the manner and for the purpose set forth.

No. 28,372.—JOHN S. HUGGINS, of Timmons ville, S. C.—*Improvement in Ploughs*.—Patent dated May 22, 1860.—A is the beam; B B are the handles; D is the standard; and *d* the cross wrung of the plough; *a* is the helve, *b* the share, *g* the sword; *m* and *n* are bolts by which share *b* and sword *g* are secured to the helve *a*. H is the clevis, and *h* is a link to which it is coupled by a pin *i*, said link being pivotted to the beam.

The inventor says: I *claim*, first, the adjustable helve *a*, in combination with the slotted beam A, and the removable shares, the whole constructed and operating as specified, for the purpose set forth.

Second. I claim the removable sword *g*, in combination with the adjustable helve *a* and removable shares, the whole arranged and operating as specified, for the purpose set forth.

No. 28,373.—STEPHEN HULL, of Poughkeepsie, N. Y.—*Improvement in Supporting the Grinding Plates in Mills*.—Patent dated May 22, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* attaching a cylinder, having a rough or grating surface, to the frame of grinding mills, with spring hoppers, when the cylinder is made to run in an upright position or nearly so, in combination with portable grinding mills, substantially as and for the purposes set forth.

I also claim the cylinder with the diamond points in spiral rows, in combination with spring hoppers, when the cylinder is made to run in an upright position or nearly so, substantially as set forth and for the purposes described.

No. 28,374.—G. HENRY HULSKAMP, of Troy, N. Y.—*Improved Pianoforte Action*.—Patent dated May 22, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement and construction of the action for pianofortes, substantially as set forth.

Second. I claim the regulating screw L, secured to the key, and also the spring M, to hold the hammer lifter in its proper place, substantially as set forth, or its equivalent.

Third. I claim the improved back check, with spring fastened to the key, for the purpose set forth, substantially as described.

Fourth. I claim the lever D D, jointed and connected with the hinge butt and hammer butt, to lift the hammer or its equivalent.

Fifth. I claim securing the hinge butt to its bar, in the manner and for the purpose set forth, or its equivalent, and the same device in other parts in the action.

No. 28,375.—JOHN R. INGERSOLL, of New York, N. Y.—*Improved Hair Brush*.—Patent dated May 22, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A brush provided with an elastic reservoir, so that by compression of some part thereof the liquid will be injected into the brush, as shown and described.

No. 28,376.—DANIEL C. JORDON, of Centre Port, N. Y.—*Improvement in Hand Cultivators*.—Patent dated May 22, 1860.—The object of this invention is to obtain a cheap and portable hand cultivator, for eradicating weeds and loosening the soil in drill husbandry, and in passing where the plough would be too cumbrous.

Claim.—The combination of the several parts described, whereby is obtained adjustability and portability, when the same are arranged in the relation set forth, for the purposes specified, it being understood that I do not claim each part separately or irrespective of its substantial arrangement.

No. 28,377.—JOSEPH W. KERR, of Pittsburgh, Pa.—*Improvement in Gasaliers*.—Patent dated May 22, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Combining with a gasalier, consisting of a cluster of gas burners, placed in or near the mouth of a flaming pipe or tube, a ventilating pipe D and screw B, constructed and arranged substantially as described, for the purposes of ventilation and increasing the brilliancy of the light.

No. 28,378.—LEONARD KING, of Bridgeport, Conn.—*Improved Fire Escape*.—Patent dated May 22, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the employment of the ladder D, in place of the perch, for connecting the fore wheels A and the hind wheels, substantially in the manner described.

Second. The combination of the hinged legs F and brake, substantially as described, for the purpose of securing the hind wheels with the frame C in the desired place and position.

Third. The arrangement and combination, with the ladders D, of the sliding head *e*, operated by a screw *e*¹, substantially as and for the purpose specified.

Fourth. The arrangement of the sockets *k*, in the ends of the axle *d* of the hind wheels, in combination with the braces J, constructed and operating substantially as and for the purpose set forth.

Fifth. The arrangement and combination of the fore wheels A, catch E, ladders D, hind wheels B, and frame C, substantially as and for the purpose described.

No. 28,379.—A. KIRLIN, of New Boston, Ill.—*Improvement in Seeding Machines*.—Patent dated May 22, 1860.—This invention consists in the arrangement of rotary cylinders in the bottoms of two hoppers, for planting in two rows at one time, having suitable cups punched in them for receiving and dropping seed into a vertical seed tube as they are rotated, and having on each of their sides a number of suitable cams for operating valves placed in the bottoms of the seed tubes, so that the dropping of seed from the hoppers into the bottom of the tube and the dropping of said seed from the seed tubes will take place alternately, thereby enabling the operator to bring the bottom of the seed tubes near the surface of the ground and drop the seed instantly from them into the hills, regularly, without scattering the seed.

Claim.—The drums G G, with their side cams and cups, arranged as set forth and operated by the marker wheels E E, in combination with the yoke rods K and valve bottoms J, as and for the purposes set forth.

No. 28,380.—LOUIS KNOCKE, of Davenport, Iowa.—*Improved Fire Escape*.—Patent dated May 22, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination and arrangement of a movable platform *a* with hinged sides *c f d e*, a hinged and jointed mast *p q*, carriage *c*¹ *k*¹, staples *y*, and anchor bars *x*, substantially as and for the purposes set forth.

Second. Combining a movable platform with hinged sides, which consist of hinged railings *d e*, a hinged bottom *f*, and a ladder *c*, substantially as and for the purposes set forth.

Third. Combining the carriage *c*¹ *k*¹ with tapering cross beams *n*¹, staples *y*, and anchor beams *x*, substantially as and for the purposes set forth.

No. 28,381.—GOTTFRIED KOBER, of New York, N. Y.—*Improvement in Machines for Making Lozenges*.—Patent dated May 22, 1860.—The object of this invention is to produce a simple and efficient mechanism for cutting out lozenges, giving to them the desired color and impressing them with suitable letters or inscriptions.

The inventor says: I *claim*, first, the arrangement and combination of the vibrating arms D, the spring F, cutters *h*, scrapers *e* and *f*, and pistons *l*, constructed and operating substantially as and for the purpose specified.

Second. I *claim*, in combination with the pistons *l* and cutters *h*, the coloring roller P, when the same is operated by vibrating arms Q, or their equivalents, so as to sweep over the faces of the pistons, substantially in the manner and for the purpose described.

No. 28,382.—THOMAS B. LAMB, of Summitt, Mich.—*Improved Vise*.—Patent dated May 22, 1860.—At the back of the stationary bar A is a socket I, in which there are placed two grippers J J, one at each end of the bar F. These grippers are simply metal blocks having their inner sides serrated, corresponding to the racks *e e*. The grippers are allowed to slide laterally in the socket I, and both grippers are encompassed by a metal strap K, in one end of which the axis of an eccentric L bears against one gripper; to the upper end of the axis of the eccentric L a crank *f* is attached.

Claim.—The combination of the grippers J J, pressure eccentric L, and serrated bar F, with the socket I and jaws B D, as and for the purpose shown and described.

No. 28,383.—JOEL LEE, of Galesburgh, Ill.—*Improvement in Corn Planters*.—Patent dated May 22, 1860.—This invention relates to improvements in several parts of seed planters, and is designed to render such planters more accurate.

The inventor says: I *claim*, first, the feet, formed and constructed as described, the plunger, the friction rollers, the cam, and the oscillating arm, to save the friction of the plunger, when the same are arranged and used in the manner and for the purpose specified.

Second. The arrangement of the seed chamber in the foot, with the cut-off valve, the oscillating arm and the groove in the top of the dropper, when used as and for the purpose specified.

No. 28,384.—WILLIAM N. LOCKWOOD, of New Britain, Conn.—*Improvement in Ox Yoke Fastenings*.—Patent dated May 22, 1860.—A is a yoke, or part of one, having a hole for

inserting the bow B; C is the pin which passes through the bow; D is a hinged bar or horn which fastens and secures the pin to the bow.

Claim.—The pin C and horn D attached to the same stock, as described, and operating in combination with the ox bow B as a fastening for ox yokes, substantially as set forth.

No. 28,385.—PAUL MARCELIN and ERNEST EUDE, of New Orleans, La.—*Improvement in Apparatus for Clarifying Cane Juice.*—Patent dated May 22, 1860.—This invention consists of an improved apparatus for the manufacture of sulphurous acid or bi-sulphate of lime, and for using the same in the production of sugar.

The inventors say: We *claim* the combination of the furnace, washer, pumps, gasometer, tester, receivers, water column, and alembic, the whole being constructed, arranged, and operated substantially as set forth, for the purposes described.

Second. We also claim the use of the gasometer K and gas tester Y in combination with either the pumps H and furnace A, or with the alembic I, substantially in the manner and for the purposes specified.

No. 28,386.—JOHN W. MASTEN, of Utica, N. Y.—*Improvement in Seed Planters.*—Patent dated May 22, 1860.—A is the seed hopper; it is supported on a frame *a* resting on the axle B, said axle having driving wheels H. C is a jointed frame connected to the under side of the axle, having its bottom sections hinged, as shown at *b*; to the forward end of these hinged sections are secured the furrow shares D immediately behind which an opening or hole is made in the hinged section, to allow the seed conducting tube E to pass through, said tube being placed immediately under and in communication with an opening in the bottom of the hopper A and serving to conduct the seed into the furrow prepared by the shares D; a concave seed roller F is suspended from the frame C just behind the tube.

The inventor says: I *claim*, first, the adjustable hinged projection I on the seed slide G, in combination with the cams *e e* on wheel H¹, substantially as and for the purposes set forth.

Second. The arrangement of the partitioned hopper A, distributing seed slide G, spring cut-offs *g*, adjustable hinged projection I, wheel H¹ with cams *e e*, main frame *a*, and jointed frame C, in the manner and for the purposes set forth.

No. 28,387.—JOHN MASTERS, of Waukegan, Ill.—*Improvement in Ditching Machines.*—Patent dated May 22, 1860.—The object of this invention is to obtain a machine that will form a ditch and elevate and discharge the excavated earth upon one side of the ditch however deep it is found desirable to dig down.

The inventor says: I *claim*, first, the combination, with the trough and elevators, of the adjustable standards M M, adjustable cross brace N, chain P, and windlass P¹, arranged and operating substantially as set forth.

Second. I claim, in combination with the adjustable castor wheel and standard D, the two adjustable inclined slotted coulters S S, arranged as and for the purposes set forth.

No. 28,388.—THOMAS J. MAYALL, of Roxbury, Mass.—*Improvement in the Manufacture of Rubber Hose.*—Patent dated May 22, 1860.—The inventor says: I take a metal pipe of the intended size of the bore of the hose or tube and fold around it strips of cloth covered with a vulcanized compound of rubber or gutta percha, or strips of the same compounds prepared with fibrous materials, for the purpose of giving it additional strength; after the hose is thus prepared I wrap it tightly in sheets of flexible metal; the hose is then vulcanized; I take great pains, in vulcanizing the hose, to wrap it tightly in the sheets of flexible metal.

Claim.—The mode of vulcanizing India rubber or gutta percha hose or tubing, by heating the same in sheets of flexible metal, thereby gaining greater strength and a smooth surface to the hose or tubing.

No. 28,389.—THOMAS J. MAYALL, of Roxbury, Mass.—*Improvement in Rubber Hose Tubing.*—Patent dated May 22, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, filling or partially filling a woven tube, composed of cotton, flax, or other fibrous materials, with any proper rubber cement, and then driving the said cement into the inner surface of the woven tube, so as to form a water proof lining therein by means of rolls or other devices for accomplishing the desired result applied to the outside of the woven tube.

Second. I claim inserting within the woven tube, coated on its interior surface with an adhesive cement, as described, an inner tube of rubber or gutta percha, so that the woven tube and inner tube can be united by vulcanizing, as set forth, and for the purpose of forming a smooth bore to the hose or tubing.

Third. I claim sprinkling or dusting the outer surface of the rubber or gutta percha tube, that is, to form the lining of the hose, with such a non-adhesive material as shall incorporate

with the adhesive cement on the inner surface of the woven tube when heated or cured, as set forth

No. 28,390.—WILLIAM T. McMILLEN, of St. Louis, Mo.—*Improved Coal Grate*.—Patent dated May 22, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement and location of the hot air chambers H I I¹ J, with their communicating passages and with regard to the fire box and the driving and ascending flues L M, whereby I economize heating and radiating surface without impeding the draft, as set forth

No. 28,391.—MONTGOMERY C. MEIGS, of Washington, D. C.—*Improvement in Valves for Hydrants, &c.*—Patent dated May 22, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination of a barrel or slide having the contrivance for regulating the flow of water through the barrel or slide by means of serrations, or notches, or perforations of proper form, and extending to and terminating at different depths or heights above the seat of the poppet valve, forming a slide poppet valve.

Second. The combination of the conical plug or many-way valve, used as a stopcock for governing the distribution and flow of water at the intersection of two or more water mains or distributing pipes, with the serrated or perforated slide poppet valve for a hydrant, the valves thus combined into one being lifted and depressed by a single screw.

Third. The combination and arrangement of the various parts into a many-way stopcock and hydrant or fire plug, substantially as described and set forth.

No. 28,392.—AYRES P. MERRILL, JR., of Natchez, Miss.—*Improvement in Locks for Cotton Bales*.—Patent dated May 22, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the rounded out notches in the end of the strap, band, or hoop, and the pyramidal shaped opening in the buckle, for the purpose of forming a lock or fastening to the hoops of cotton and other bales, and when constructed to operate together, substantially as described.

No. 28,393.—PURCHES MILES, of New Haven, Conn.—*Improved Meat Cutter*.—Patent dated May 22, 1860.—The operation of this machine is as follows: The crank L is turned with the right hand, and the cylinder J is filled with meat in pieces of suitable size; as the cap H rotates the flanch *f* forces the meat down between the flanches *b*, and the pendants *g* force the meat past the cutters B. The flanches *b*, in connection with the rotating flanch *f*, have a tendency to feed or press the meat towards the periphery of the case or shell, and as the meat becomes minced, or cut sufficiently fine to pass between the pendants *h*, it is discharged through the spout C, by the pendants *h*¹, the latter clearing the space between the pendants *h* and the periphery of the case or shell. The operator presses his left hand on the plunger K. The sausage cases are connected to the spout C.

The inventor says: I *claim*, first, the combination with the cap H, of the screen *h h*¹, in the manner shown and described, so that the meat cannot be discharged until properly cut, all as specified.

Second. The employment of the plunger K, in combination with the screen *h h*¹, as and for the purposes set forth.

Third. The employment of taper formed pendants *g*, in combination with the eccentrically arranged cutters B, as and for the purposes shown and described.

Fourth. The employment of the spring G, and stop D, in combination with the screen *h h*¹, as and for the purposes set forth.

No. 28,394.—JOSEPH S. MILLER and S. LLOYD WIEGAND, of Philadelphia, Pa.—*Improved Machine for Printing Butter*.—Patent dated May 22, 1860.—This invention consists in moving the mould during the act of printing, and in leaving the printed butter in a state of rest at the time of drawing the mould, and also in the particular arrangement of mechanism for effecting this result.

The inventors say: We *claim*, first, the mould A, and follower or piston M, and the lug O, used in the manner and for the purposes described.

Second. The treadle F, link G, lever E, and links D and D¹, operating the mould A, and piston M, substantially in the manner and for the purposes described.

No. 28,395.—GEORGE A. MITCHELL, of Turner, Me.—*Improved Jointed Tip for Boots and Shoes*.—Patent dated May 22, 1860.—This invention consists in providing the upper and toe portions of boots and shoes with a tip, which is extended back the desired distance towards the heel, and made in sections. The ends or edges overlapping each other where it protects the upper, and not coming in contact where it is confined between the soles, in order

to effectually protect the upper, and at the same time not render the soles rigid or prevent their elasticity.

Claim.—The construction and application of the described tip, made jointed or in sections, substantially in the manner and for the purposes fully set forth.

No. 28,396.—DANIEL MONTAGUE, of New Bedford, Mass., and JAMES TOWNSEND, of Gardiner, Me.—*Improved Glass Door Plate.*—Patent dated May 22, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim*, first, the combination of a hollow glass door or name plate A, spring fastening strip or bar B, and elastic mat or cushion D, substantially in the manner and for the purpose described.

Second. The spring fastening strip, provided with screw bolts, arranged within the hollow glass door or name plate A, and having its ends confined in grooves *a a* of the glass plate A, substantially as and for the purpose set forth.

No. 28,397.—ORRIN NEWTON, of Pittsburgh, Pa.—*Improvement in Making Sheet Metal Caps, &c.*—Patent dated May 22, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The use of a die, or succession of dies, each having a smaller cavity than the preceding one, the mouth of each die being of the diameter of the blank or unfinished cap to be operated upon, and the diameter of the cavity rapidly diminishing through part of its depth and thence to the bottom, having the same angle to the axis of the die as the sides of the finished cap are designed to present to its axis, with a plunger or plungers fitting into said die of the same shape as the lower part of the dies, and of such diameter as, together with the metal of the disk or cap, to fill up the entire diameter of the dies, for the purpose of drawing out radially and contracting circumferentially the edge of metallic disks so as to form seamless caps or boxes, substantially in the manner described.

No. 28,398.—HENRY L. NICHOLS, of New York, N. Y.—*Improved Carpet Cleaner.*—Patent dated May 22, 1860.—The object of this invention is to combine in a novel manner with vibrating beating or whipping arms, stiff or elastic, a brush or broom cylinder, and fans, for beating, brushing, and blowing off the dust from carpets all at one and the same operation, and for brushing both sides of the carpet as it passes through the machine.

Claim.—The rotary brush and blast boards *a*, in combination with vibrating beating arms *m m*, arranged substantially as and for the purposes set forth.

No. 28,399.—JAMES NUTE, of East Boston, Mass.—*Improvement in Hanging Top Sail Yards.*—Patent dated May 22, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Supporting the yard E, independently of the top mast, substantially as shown and described, so that, in case the top mast is carried away, the yard will still remain supported, all as set forth.

No. 28,400.—G. M. NYE and A. T. HAVILAND, of Elmira, N. Y.—*Improved Hollow Auger.*—Patent dated May 22, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim*, first, the combination and arrangement of the cutting lips or edges *e f*, having their inclinations alternately reversed, so that one cuts in a direction which crosses that of the preceding one; said cutters being formed with a series of planes and grooves *i i*, upon their faces, substantially in the manner and for the purposes specified.

Second. I claim the vertical spurs *g g*, in combination with the alternate cutters.

No. 28,401.—CHARLES OYSTON, of Little Falls, N. Y.—*Improvement in Power Press.*—Patent dated May 22, 1860.—In using this press the power is applied to the pinion shaft F, by a lever J, one end of which is attached loosely to the shaft, and from the other may be hung a suitable weight. To this lever is applied a weighted pawl K, which engages with the teeth of a ratchet wheel M, keyed securely to the shaft F. By raising or depressing the lever J, the shaft will be turned in the direction indicated by the arrow, and the follower will be forced down.

Claim.—The combination of the internally geared sector C, formed as shown, with the sector D, pinion E, follower B, rods G H, lever J, crank N, and pawls K P, the said parts being constructed and arranged to operate, as and for the purpose shown and described.

No. 28,402.—CHARLES W. PACKER, of Philadelphia, Pa.—*Improvement in Ice Cream Freezers.*—Patent dated May 22, 1860.—This invention consists in the combination of the inner revolving vessel of an ice cream freezer, with certain stationary blades and stationary

deflectors, arranged and operating so as to cause, in the inner vessel, continuous eddies of the cream, and a continuous removal of the frozen portions of the latter from the sides of the vessel, and a continuous flow of the unfrozen portion towards the sides of the same.

Claim.—The revolving vessel C, in combination with stationary inclined blades K and K¹, and inclined deflectors x and x^1 , the whole being arranged and operating as and for the purpose set forth.

No. 28,403.—LOUIS PLANER, of New York, N. Y.—*Improvement in Converting Reciprocating Rectilinear into Intermittent Rotary Motion.*—Patent dated May 22, 1860.—The claim and engravings explain the nature of this improvement.

The inventor says: I *claim*, first, the employment of the hinged cam E, in combination with the dogs C D and grooved wheel A, constructed and operating as and for the purpose described.

Second. Arranging the dogs C D, with V-shaped edges lm , to fit into a corresponding V-shaped groove or recess B, in the wheel A, substantially in the manner and for the purpose specified.

Third. Giving to the advancing corners $c^1 d^1$ of the dogs C D, the shape of knife edges, substantially as and for the purpose set forth.

Fourth. Arranging the surface of the dog C in such a manner that its rear edge projects above the upper edge of the recess B, and that all the dirt scraped off by the advancing corner c^1 is caused to discharge over the wheel A, substantially as described.

No. 28,404.—JOSEPH F. POND, of Cleveland, Ohio.—*Improved Washing Machine.*—Patent dated May 22, 1860.—This invention consists in combining with a fluted roller, in fixed bearings, a spring bed beneath said roller, grooved obliquely to the axis of the roller, so that the clothing will be subjected to a continued pressure while passing between the bed and roller.

Claim.—The obliquely fluted spring bed C, substantially as described, in combination with the fluted roller R, arranged and operating substantially as and for the purpose specified.

No. 27,405.—WASHBURN RACE, of Seneca Falls, N. Y.—*Improvement in Pumps.*—Patent dated May 22, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* suspending the spout piece H and its dependent parts, in the hollow standard A, by a conical bearing, or its equivalent, the parts suspended being free from any connection or support except the said suspension bearing, substantially as and for the purposes specified.

In combination with the above suspension of the parts in the standard A, I also claim the arrangement of the spout piece H and standard A, so that the spout may be turned at any moment, either to the right or left position, in relation to the working lever, as described.

I also claim the arrangement of the grooves or flutes $b b$, in the conical bearing of the spout piece, or correspondently in the standard, as specified, so as to apply the means of ventilating the well to the additional purpose of preventing the freezing of the water within the spout piece, substantially as set forth.

No. 28,406.—ANDREW RANKIN, of Philadelphia, Pa.—*Improved Lock.*—Patent dated May 22, 1860.—This invention consists in a supplementary tumbler, having a spring, certain projections, and a shoulder, in combination with a spring and stop, connected in the case of the lock, the whole, with the bolt, being arranged for joint action, thereby enabling the occupant of the room to lock himself in, free from the intrusion of those desiring to gain access from the outside, and at the same time enabling the possessor of the key to lock and unlock the door from the outside so long as it remains unlocked from the inside.

Claim.—The supplementary tumbler, its spring r , its projections t and u , and shoulder q , all of the form described, in combination with the spring p and stop s , the whole, with the bolt, being arranged for joint action, as and for the purpose set forth.

No. 28,407.—ISAAC N. RANKIN, of Middletown, Iowa.—*Improvement in Ploughs.*—Patent dated May 22, 1860.—The back mould board and landside are somewhat below the front ones, and the latter, as the implement is drawn along, remove all weeds and trash, and prepare the way for the back plough, which throws up the sub-soil; the front plough turns down the stubble, the weeds, and manure, while the back plough completely covers the same with the sub-soil, and favors their decomposition to nourish the crop to be grown.

Claim.—The arrangement of the double curved standards C C, braces F F, bars E, landsides D D, shoes C¹ C¹, handles B B, and beam A, as and for the purpose shown and described.

No. 28,408.—M. G. RHODES and J. M. SCAGGS, of Talladega, Ala.—*Improvement in Ploughs.*—Patent dated May 22, 1860.—This invention consists in a peculiar construction

of the plough stock, making the same entirely of iron rods, fastened together by means of screws in such a manner that both the beam and the handles can be adjusted, and that a light and strong stock is produced.

Claim—The combination of the standard A, rods $a\ b\ c\ a^1\ b^1\ c^1$ and $d\ d^1\ f$, substantially as described, for the purpose of producing a new and improved plough stock.

No. 28,409.—CLARK ROBERTS, of Winchester, Ill.—*Improved Washing Machine*.—Patent dated May 22, 1860.—This invention consists of a peculiar arrangement of levers, to which are attached beaters or pressers, with turners, shovers, and stirrers, in a tub of ordinary construction.

The inventor says: I *claim*, first, the peculiar construction and arrangement of the levers, in combination with the turners or stirrers, substantially as described and for the purposes set forth.

Second. A hinged or opening shaft bearing, fastened and secured by a swinging cap g , substantially as described.

No. 28,410.—THOMAS N. READ, of Aspen Wall, Va.—*Improvement in Tobacco Presses*.—Patent dated May 22, 1860.—The claim and engravings explain the nature of this invention.

Claim.—In combination, with a hinged presser beam carrying at its free end the gearing and the person or persons who operate the press, a hinged rack, which is held up to the gearing by a presser roll, or its equivalent, substantially in the manner and for the purpose set forth and explained.

No. 28,411.—MARSHALL S. ROOT, of Medina, Ohio.—*Improvement in Seeding Harrows*.—Patent dated May 22, 1860.—The inventor says: The advantage gained by this improvement is in the construction of the frame B B, so that the harrow wheels may be made to follow each other in as direct a line as the operator may desire.

Claim.—The special arrangement of adjustable jointed frame B, harrows Fig. 1, and seeding machine Figs. 2, and 3, when combined and operating in the manner and for the purposes described.

No. 28,412.—SAMUEL T. SANFORD, of Fall River, Mass.—*Improved Vegetable Slicer*.—Patent dated May 22, 1860.—The operation of this machine is as follows: The vegetables to be cut are placed in the box or hopper B; the lever H is then forced down, and the follower or plunger F drives the vegetables down between the cutters, the latter slicing the vegetables into pieces corresponding in thickness to the spaces between them.

Claim.—As an improved article of manufacture, a vegetable cutter, composed of a table A, hopper B, knives D, uprights $D^1\ D^1$, followers F, toggle rod G, lever H, when arranged and constructed as shown and described.

No. 28,413.—THEODORE SELLERS, of East Birmingham, Pa.—*Improvement in Preserve Cans*.—Patent dated May 22, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The use of a cylindrical ring of India rubber, or other elastic material, in combination with and interposed between the neck of a bottle or jar and its cap or cover, each having a corresponding groove or recess for the reception of the ring, constructed and arranged substantially as described.

No. 28,414.—AMOS SHEPARD, of Southington, Conn.—*Improved Sausage Filler*.—Patent dated May 22, 1860.—This invention consists in arranging a revolving cam, which is a cone, or a section of a cone, on a shaft in combination with a cut-off, in such a manner that the face of the cam fits the cut-off and drives the cut-off in a circle whose centre is found in the axis of motion of the shaft on which is the cam.

Claim.—Arranging the cam or cams C C, in combination with the cut-off E, and the valve G, as and for the purposes described.

No. 28,415.—ISAAC SHERMAN, of Cleveland, Ohio.—*Improvement in Evaporating Apparatus*.—Patent dated May 22, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Making a sugar pan, as described, having one or more perforated tin strainers across the pan, near the outside of the fire surface, and gates placed transversely outside of the fire surface, so as to keep any sediment or other impurity from passing into the boiling part of the pan; and further, to allow the scum that rises from the boiling mass to flow over the strainer and settle there, so that it can be removed at the will of the operator

No. 28,416.—C. J. SHIVER, of Camden, S. C.—*Improvement in Ploughs*.—Patent dated May 22, 1860.—The share D is attached to the front bar *d* of the frame C, the front bar *d* serving as its foot or standard. The share is attached to the upright by having a pin, or projection *k*, at its back, fitted in a hole in the bar *d*, and having a collar or keeper *l*, which is on the upright, fitted over a lip *m*, at the upper end of the share. By this means the share is not only firmly secured to the front bar *d*, but readily attached to it and detached therefrom.

Claim.—The arrangement of the double curved frame C, horizontal bar *e*, bars *d d*, eyes *f f*, beam A, and share D, as and for the purposes shown and described.

No. 28,417.—JAMES M. STEPHENSON, of Anderson, Ind.—*Improvement in Pumps*.—Patent dated May 22, 1860.—In this invention, when the piston B¹ is turned in either direction, the water rushes in behind it, while it drives the water before it through one or the other of the pipes *d*, and the sand and other matter drawn into the cylinder will by virtue of its greater specific gravity fall down through the slot, or opening in the cylinder, into the air tight chamber F, and the cylinder will thus be kept free of grit and sand and the piston in working order.

Claim.—The arrangement and combination of the separate chamber F, with the pump cylinder A, inlet orifices *d d*, and the pipes J J, as and for the purpose shown and described.

No. 28,418.—B. T. STOWELL, of Quincy, Ill.—*Improvement in Corn Planters*.—Patent dated May 22, 1860.—This invention consists of a peculiar seed distributing device, constructed and arranged in such a manner as to obviate the objection to this class of machines, to wit: the unequal discharge of the seed and the derangement of the parts consequent upon a slight wear of the same.

Claim.—The arrangement and combination, with a hub G, composed of one piece, of the radial recesses *c*, to receive the spokes, the annular recess *e*, to receive the seeds, and the adjustable plates *f*, as and for the purpose shown and described.

No. 28,419.—WILLIAM H. TRISSLER, of Lima, Ind.—*Improved Fruit and Vegetable Cutter*.—Patent dated May 22, 1860.—This invention consists mainly of a rectangular box A, which has a sliding bottom D, transversely slitted and armed with cutting blades *e e*; at the same time the said box has a follower C working freely within the same, which is combined with a jointed hand lever B, in such a manner that while the operator with one hand can impart a reciprocating motion to the cutting bottom of said box, with the other hand he can bear down upon the lever B.

Claim.—The arrangement of the hopper box A, the sliding cutter bottom D, the follower C, the hand lever B, the pitman F, and the crank shaft G, with each other and with the supporting bench K, in the manner and for the purpose set forth.

No. 28,420.—JONATHAN T. TROTTER and ISAAC F. WILLIAMS, of New York, N. Y.—*Improvement in Finishing the Surface of India Rubber Goods*.—Patent dated May 22, 1860.—The claim explains the nature of this invention.

Claim.—The process or method of fixing or finishing the coating of flock, cork, or other fibrous material by the use of camphene, naphtha, bi-sulphide of carbon, or other solvents of any of the vulcanizable gums, when applied by means of the sizing roller or machine, as described, as a secondary or additional operation for fixing or finishing the surface of the previously flocked goods, substantially as set forth.

No. 28,421.—A. K. TUPPER, of Milford, Mich.—*Improvement in Apparatus for Generating Gas*.—Patent dated May 22, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The retort A, having on one side, below the feed pipe, a series of gutters, arranged with a descent from one to the other in opposite directions, alternately, and having a narrow space between the said gutters and the opposite side for the upward escape of the gas and vapors, substantially as described.

No. 28,422.—WILLIAM TUSCH, of Brooklyn, N. Y.—*Improvement in Brushes*.—Patent dated May 22, 1860.—The claim and engravings explain the nature of this invention.

Claim.—As an improved article of manufacture, a brush, having its back provided with curved or angular plates which will cut into and hold the soap when the latter is pushed thereon, as shown and described.

No. 28,423.—WILLIAM I. TUSTIN, of Benicia, Cal.—*Improvement in Wind Mills*.—Patent dated May 22, 1860.—This invention consists in arranging on the shaft of the driving sails a series of regulating fans, which, or the arms of which, connect with the windward edge of the driving sails in such a manner that whenever the velocity of the wind wheel exceeds a

certain point the resistance of the regulating fans causes the driving sails to turn to the wind and to decrease their effective surface; it further consists in combining with the arms of the driving sails, and with those of the regulating fans an adjustable spring in such a manner that the velocity at which the regulating fans begin to act can be varied at pleasure.

Claim.—The arrangement of the regulating fans G on the shaft C, when the same are connected to the driving sails A by means of links e, together with a spring I, substantially as and for the purpose described.

No. 28,424.—A. T. TWING and EBENEZER WOOD, of Louisburgh, and WILLIAM ELDERHOST, of Troy, N. Y.—*Improvement in Preserve Cans.*—Patent dated May 22, 1860.—The object of this invention is to remove the air from the interior of a fruit can without heating the contents, and to seal the same up perfectly tight and with an easy manipulation without giving the air a chance to find its way back to the interior of the can.

The inventors say: We *claim*, first, the employment of the neck B of a preserve can A as a receiver for an air pump, applied to the same by means of a chamber D, substantially as and for the purposes specified.

Second. The arrangement of the chamber D with the channels c d and with a funnel E, when the same is used in combination with a fruit can A, substantially as and for the purposes set forth.

No. 28,425.—R. L. UNDERHILL, of Bath, N. Y.—*Improved Door Latch.*—Patent dated May 22, 1860.—This invention consists in having the knob arbor so arranged that it may slide longitudinally in the door and transversely therewith, said arbor being connected with a slide bolt through the medium of a lever, or an equivalent device, and in using in connection with the above a spring bolt fitted in the tile of the door frame and operating in relation thereto.

Claim.—The employment or use, in connection with a sliding knob arbor B, of bolts E H fitted respectively in the door A and stile F, and arranged, in relation with each other and the knob arbor, to operate as and for the purpose set forth.

No. 28,426.—ABRAHAM VOORHEES, of Grand Rapids, Mich.—*Improvement in Shortening Tire.*—Patent dated May 22, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the clamping bars C H, short clamping anvil block K, and detached lever or slide L working between guides F G, as set forth, for the purpose of clamping and upsetting or shortening wagon tires, as described and represented.

No. 28,427.—JEPHTHA A. WAGENER, of Pultney, N. Y.—*Improvement in Harvesting Machines.*—Patent dated May 22, 1860.—H H are teeth attached to the adjustable frame K, and prevent the straw from moving while the heads are severed by the spiral knives; I is a straight knife on the base of the teeth H which acts in concert with the spiral knives F and severs the heads from the straw; i² is a spring placed between the teeth H and straight knife I to cause a continuous and elastic shear to the edges of the knives F acting in concert with the edges of the knife I.

Claim.—The revolving canvas G acting in concert with cylinders E E, spiral knives F F, and straight knife I, adjusted on spring i² set on the base of teeth H, substantially as and for the purpose described and set forth.

No. 28,428.—SYLVESTER W. WARREN, of New York, N. Y.—*Improvement in Apparatus for Vulcanizing Caoutchouc.*—Patent dated May 22, 1860.—This invention consists of a portable apparatus designed especially for the use of dentists for vulcanizing the plates of artificial teeth and other articles.

Claim.—The portable vulcanizing apparatus, constructed substantially as set forth and for the purposes specified.

No. 28,429.—JAMES WEED, of Muscatine, Iowa.—*Improvement in Power Presses.*—Patent dated May 22, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The employment or use of toggles or toggle frames applied to the press or follower, substantially as described, so as to admit of repeated applications of their power during a single movement or stroke of the follower, or, in other words, during the compression of each bale, for the purpose specified.

No. 28,430.—JOHN W. WILLETT, of Wareham, Mass.—*Improved Camp Stool.*—Patent dated May 22, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The said improved portable folding chair, as made with its back posts and arm rests, or the latter hinged or connected to the crossed leg frames and the flexible seat and having struts applied to them, substantially as specified.

No. 28,431.—CHARLES WOOSTER, of New York, N. Y.—*Improvement in Gas Retorts*.—Patent dated May 22, 1860.—A is the body of the retort, cast with a central flue or chimney base *b b*; the external portion of the retort is of the form of an inverted frustrum of a cone; the flue or chimney base is represented as cylindrical, but may have an upward taper; to burn out the retort it is only necessary to raise the half C of the cover high enough to establish communication between the opening *j* and the retort, while the latter is kept hot by a good fire; the air then admitted under the edges of the cover serves to inflame the residuary carbon and the draft of the chimney causes the escape of the production of combustion through the opening *j* into the flue *b b*.

Claim.—The employment of the central flue *b b* in combination with the body or shell A, substantially as and for the purposes shown and described.

No. 28,432.—HENRY A. ALDEN, of Matteawan, N. Y., assignor to the NEW YORK RUBBER COMPANY.—*Improvement in Flexible Hose Tubing*.—Patent dated May 22, 1860.—The claim and engravings explain the nature of this invention.

Claim.—As a new and useful article of manufacture, a compound flexible tubing or hose formed of close or woven and lapped tubes, with water proof coatings or linings, and combined as described.

No. 28,433.—CHARLES R. ALSOP, of Middletown, Conn., assignor to J. W. ALSOP, of New York, N. Y.—*Improvement in Gun Stocks*.—Patent dated May 22, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the construction of the stock of a fire-arm intended to be fired from the shoulder, with an opening B for the thumb to pass through, and for the reception of the ball of the thumb, and with the portion D, in front of the said opening, so nearly perpendicular to the barrel as to allow it to be grasped by the hand with the thumb through the said opening, substantially as described and represented in Fig. 1 of the drawing, whether the butt A is or is not capable of disconnection.

I also claim the attachment and securing of the two parts of the stock together by means of a round tenon or dowel *b*, and a dovetail tongue *c*, on the rear portion, a corresponding mortise and dovetail groove in the front portion, and a spring bolt E applied within the front portion, to lock the dovetail tongue therein, the whole applied and operating substantially as specified.

No. 28,434.—CHARLES BADGER, of Edgerton, Wis., assignor to MELVILLE BADGER, of said Edgerton.—*Improvement in Grist Mills*.—Patent dated May 22, 1860.—This invention consists in constructing a grinding mill, in which geared machinery is firmly attached to a movable frame that is placed inside of the principal frame that supports the bed or stationary stone and hopper, and which movable frame sustains at the upper end of the vertical shaft the runner or upper stone, and which interior frame, gearing attached thereto, vertical shaft and runner, are elevated and lowered together, whereby the stones are separated or brought nearer together to grind coarse or fine, and whereby the different parts of the gearing retain their relative position undisturbed by such elevation or depression.

The inventor says: I *claim*, first, the framework 27, in which the gearing is located, in combination with the vertical shaft and runner, when arranged substantially as described, for the purposes set forth.

Second. The combination of the devices for driving the runner with the devices for driving the bolt, when constructed and operated substantially as described.

Third. The cog gears on each side of the pinion, in combination with the pinion and shaft in Fig. 27, substantially as described and for the purpose set forth.

No. 28,435.—JAMES P. ELLICOTT of Washington, D. C., assignor to PHELAN & COLLENDER, of New York, N. Y.—*Improved Chalk Holder for Billiard Tables*.—Patent dated May 22, 1860. A stationary jaw *b b* is fastened to a billiard table by means of a flange *a*; a movable jaw *c f* is hinged to the stationary jaw by means of a pivot *d*, placed between the forward and the rear end of the jaw *c f*. The rear part of *c f* is provided with a weight *g*, which has a tendency to close the front part *c* of the movable jaw against the stationary jaw, and will serve to hold or clamp a piece of chalk between the two jaws.

Claim.—The combination of the lower pivoted jaw *c g*, constructed as described, with the stationary jaw *b b*, for the purposes set forth.

No. 28,436.—STEPHEN W. BROWN, of Syracuse, N. Y., assignor to himself and JOEL McCOMBER, of Watertown, N. Y.—*Improved Printers' Composing Stick*.—Patent dated May 22, 1860.—This invention consists in the use of an eccentric and elastic plate, connected with the slide and applied to the side of the stick.

The inventor says: I *claim* the employment or use of the elastic plate E, placed at the outer side of the side piece C, provided with a tongue *d*, passing through the side piece and part

b of the slide, and having attached a lever *F*, provided with an eccentric *G*, arranged as shown, or in an equivalent way, for the purpose set forth.

I further claim, in connection with the plate *E*, slide *B*, lever *F*, and its eccentric, the bridge or brace *G*, attached to the slotted sidepiece *C*, substantially as and for the purpose set forth.

No. 28,437.—A. J. GIBSON, of Worcester, Mass., assignor to himself, JOHN BOYDEN, JOSEPH P. HALE, and SAMUEL FISK, of the same place.—*Improvement in Revolving Fire-Arms*. Patent dated May 22, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, combining the barrel with the breech frame or stock by means of a pivot *b*, two doubly notched check pieces *a a*, and a sliding bolt *E*; the whole arranged and operating substantially as and for the purpose specified.

Second. Combining the downwardly movable barrel with the trigger or lever *I*, or its equivalent, in such manner that the said barrel may lock the said trigger or lever, or its equivalent, when it (the said barrel) is in its downward position, to prevent the discharge, substantially as described.

No. 28,438.—ADOLPHUS LIEBENROTH, of New York, N. Y., assignor to himself and IWAN VON AUW, of said New York.—*Improved Paper File*.—Patent dated May 22, 1860.—This invention consists in the combination of elastic bands, with covers provided with a tuck, or or tongue, whereby the papers can be placed within said file, and the parts drawn around the papers, and the tuck entered so as to hold the file together and enclose and compress the sheets of paper or other fibrous substances.

Claim.—The combination of the elastic bands *c c e e*, covers *a d*, and tuck or attachment *f*, for the purposes and as specified.

No. 28,439.—GEORGE H. MILLS, of East Boston, Mass., assignor to NATHANIEL MCKAY, of said East Boston.—*Improvement in Pumps*.—Patent dated May 22, 1860.—The intermediate cylinder *H*, having a positive action relatively to the plunger, causes the opening and closing of the ports to take place at the right time and with precision, and as the several series of ports extend around their several cylinders, or the ports of the same series are arranged at opposite points in the circumference of their respective cylinder, the intermediate cylinder works without lateral pressure, or in equilibrio, and consequently with but little friction.

Claim.—The employment of the intermediate cylinder *H*, in combination with the two stationary cylinders *A C*, and piston *B*, as and for the purpose shown and described.

No. 28,440.—J. G. PUTNAM, of Tioga, Penn., assignor to himself and J. SCHIEFFLEIR, JR., of said Tioga.—*Improvement in Corn Shellers*.—Patent dated May 22, 1860.—After the ears of corn leave the feeder they are received between the shelling cylinder *D* and concave *E*, the surfaces of both of which are furnished with teeth, or ribs. The cobs, after the grain is removed, are discharged over a curved guard plate *J*; a number of curved guards *L* is arranged over the shelling cylinder, the lower ends of which press against the annular grooves in said cylinder; these prevent the cobs from being carried over the cylinder.

Claim.—The arrangement of the divided, yielding, perforated concave *E*, feeder *B*, prongs *b*, guard plate *J*, guard *L*, and shelling cylinder *D*, as and for the purpose shown and described.

No. 28,441.—ISAAC RECKHOW, of Brooklyn, N. Y., assignor to JOHN GRIFFITH, of said Brooklyn.—*Improvement in Curing Prunes*.—Patent dated May 22, 1860.—By this invention the prunes are spread in a box or other receptacle on wire screens or open shelves, and exposed to a current of steam.

Claim.—The within described method of curing prunes by exposing them to a current of steam, substantially in the manner specified.

No. 28,442.—MARK RICHARDSON, of Philadelphia, Pa., assignor to himself, THOMAS CORT, and H. ROWBOTHAM, of said Philadelphia.—*Improved Washing Machine*.—Patent dated May 22, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the revolving beaters, constructed substantially as described, in combination with the platforms *e f* and *h*, the whole arranged within the trough and operating on the folds of the fabric as specified.

Second. The revolving shaft *K*, with its elastic vanes, when arranged within the trough in respect to the roller *H* and the mouth of the inlet *y*, substantially as and for the purpose herein set forth.

No. 28,443.—DAVID M. SMITH, of Springfield, Vt., assignor to himself, H. H. MASON, and A. C. MASON, of said Springfield.—*Improvement in Hooks and Eyes*.—Patent dated May 22, 1860.—The claim and engravings explain the nature of this invention.

Claim.—As an improved article of manufacture, a hook A having one of its legs *e* extended and bent up within the bill *a*, so as to form a snap or spring guard, as shown and described.

No. 28,444.—JOSEPH J. VAUGHAN, of Alexandria, Va., assignor to himself and S. R. VAUGHAN, of said Alexandria.—*Improvement in Car Couplings.*—Patent dated May 22, 1860. The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the skeleton bumper H, which surrounds the box, with the box and with the tumbler, for the purpose of relieving the tumbler from sudden and violent concussions, substantially as specified.

No. 28,445.—SAMUEL WELLS, of Elmore, Ohio, assignor to ELIAB KARR and ERASTUS HOWLAND, of said Elmore, and EDWARD F. DICKINSON, of Fremont, Ohio.—*Improvement in Machines for Moving Buildings.*—Patent dated May 22, 1860.—On the drum B is wound a rope or cable *d*, to the loose end of which, the power that is to work the machine, is attached, whether a team, capstan, or any other power. The unwinding of the rope *d* or turning of the drum B applies the power to the drum E and through it to the block H, multiplying itself manifold by the difference of the diameters of the gearing and drums and the series of sheaves in the blocks, so that power is exerted on the block H.

Claim.—In combination with the carriage A and the drums B E, and their operating connections, the turning block F hinged to said frame and loose block H, and their rigging, the whole being arranged for the purpose of exerting great power in moving heavy bodies and easy transportation, substantially as described.

No. 28,446.—HENRY W. ADAMS, of Brooklyn, N. Y.—*Improvement in Apparatus for Distilling Coal Oils.*—Patent dated May 29, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the employment, in the distillation of coal, shale, and other analagous substances, to obtain the oil and other liquid products therefrom, of a retort consisting of a pit dug or otherwise made in the earth, substantially as described.

Second. I claim the construction of the retort for distilling oil and other liquid products from coal, shale, or other analogous substances, in a horizontal or other slightly inclined form, with a draught through it in a horizontal direction or parallel with the floor, and without a separate furnace, so that the charge may burn away gradually toward the outlet, substantially as described.

Third. Though I do not claim the use of a separate pipe or conductor, to carry off the liquid products condensed in the retort, or the introduction of steam into the retort, I claim the steam pipe *j* in combination with the eduction pipe *b*, substantially as and for the purpose specified.

Fourth. Connecting the eduction pipe, by which the condensed liquid products leave the retort, with the main discharge pipe, by which the vapors leave the retort, substantially as described.

No. 28,447.—WILLIAM ADAMSON, of Philadelphia, Pa.—*Improvement in Machines for Picking Curled Hair.*—Patent dated May 29, 1860.—The inventor says: One or more brush feed cylinders may be used, as occasion may require; in many cases one brush cylinder with a fluted cylinder would answer, as one cylinder of brushes would allow the stock to pass between the cylinders without breaking; in other cases one brush cylinder with a smooth cylinder would answer equally well.

Claim.—The employment of a brush feed roller, made as shown and described, whether used in connection with another brush cylinder or feed roller, or in connection with plain or fluted rollers, for the purpose set forth.

No. 28,448.—LUTHER ATWOOD, of New York, N. Y.—*Improvement in the Manufacture of Oils obtained from Coal.*—Patent dated May 29, 1860.—This invention consists in a method of treating these heavy oils, paraffine fatty oils and acids, or the crude oils and natural oils from which the heavy oils are produced, so that the whole, or as much as may be desired, may be converted into thin oil suitable, when purified, to burn in lamps.

Claim.—The production of thin oils, suitable to be manufactured into illuminating oils, from the heavier parts of the crude and fixed oils and other substances within mentioned, by treating them in the manner substantially as described, during one or several continuous distillations.

No. 28,449.—GEORGE W. BROWN, of New York, N. Y.—*Improvement in Ice Cream Freezers.*—Patent dated May 29, 1860.—This invention consists of a conical can to contain the cream to be frozen, provided with a tapering dasher fitted to the can and arranged to turn freely in it.

Claim.—A conical can in combination with a tapering dasher made to correspond with the can, substantially as described, for the purposes set forth

No. 28,450.—JOHN D. BROWN, of Cincinnati, Ohio.—*Improvement in Lanterns.*—Patent dated May 29, 1860.—This improvement relates to the construction of lanterns adapted to contain a coal oil lamp, the draught passages being so protected, while preserving ample area, as to neutralize the effect of any local draught.

Claim.—The recessed floor B C formed with minute perforations over the entire surface of its upper portion B and the vertical sides c of the recess, in the described combination with the imperforate floor A, apertures E, and lamp D, the whole being constructed and arranged in the manner and for the purposes set forth.

No. 28,451.—CYRUS L. CARTER and ELEAZER JONES, of New York, N. Y.—*Improvement in Coffins.*—Patent dated May 29, 1860.—The claim and engravings explain the nature of this invention.

Claim.—As a new article of manufacture, the coffin above described, the slabs being connected and secured together by grooves, in combination with unconnected angle irons and with the second or under lid formed of a glass plate, in the manner set forth.

No. 28,452.—JOHN N. CHAMBERLIN, of Troy, N. Y.—*Improvement in Sewing Machines.*—Patent dated May 29, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the construction, arrangement, and combination of the catch or latch with the needle bar *j* and the step bar *d*, as herein set forth.

I also claim the needle bar *j*, constructed with two channels or grooves *s* and *t* crosswise of the same, in connection with the catch or latch *a* or *b*, for the purpose of holding the said needle bar in a certain position for a correct and working adjustment of the needle *l*, as well as to hold the same upward and away from any interference of the materials to be worked, as described and set forth.

No. 28,453.—JOSEPH H. CLIFTON, of Newcastle, Pa.—*Improvement in Looms.*—Patent dated May 29, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination of the jack hook lifter with an adjustable mechanism for imparting to it a reciprocating motion, arranged substantially as described, so that the range of motion of the heddle may be changed as required, to vary the opening of the shed.

Second. The combination of a rockshaft and cam plate with adjustable cams, so arranged that by varying their distance from the centre of the rockshaft the range of motion of the rockshaft is changed and the shuttle thrown a greater or less distance, as required.

Third. The combination of the lay with a vibrating shuttle carrier arranged substantially as described, so that the distance between the arms of the carrier may be varied to correspond with the distance the shuttle is thrown in passing through webs of different widths, substantially in the manner described.

Fourth. The combination of the lay with adjustable guide rods for the shuttle, so arranged that their distance apart may be varied as required, in weaving fabrics of different widths at the same time, and also that their height above the race board may be changed for fabrics varying in thickness, substantially as described.

Fifth. Arranging a cord or other material which is to be covered with a woven fabric, between the warps, and connecting it to an independent heddle which is so arranged and operated as to raise the cord with the upper leaf of the shed while the woof thread is passing between the warp covering the under side, and depress it with the lower leaf of the shed while the woof is passing between the warps covering the upper side of the cord, substantially as described.

No. 28,454.—HENRY A. CLUM, of Auburn, N. Y.—*Improvement in Barometers.*—Patent dated May 29, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the movable slides D and E, with meteorological reading only, separate and detached from any graduations for vernier purposes, for summer and winter purposes, substantially as shown and described.

Second. The application of heights above sea level, of atmospheric pressure, &c., to the ordinary barometer face, as shown in Fig. 1, columns 1 and 2, on the bed pieces A and B.

Third. The cistern, as shown in Fig. 6, consisting of two or more chambers connected by stop cocks at points above the open end of the tube.

Fourth. The entire cistern adjustment, as shown at H, Fig. 1, and N M R R S, Fig. 2, consisting of the connection of the vernier I to the cistern, which allows it to move with the cistern and tube, and also the movable cistern as fully represented in the drawing.

Fifth. The combination of two meteorological slides D and E, for winter and summer purposes, to the ordinary parlor barometer, the cistern adjustment as described, with the

cistern and further bottom adjustment, as shown on face H, Fig. 1; all as fully and substantially set forth.

No. 28,455.—L. O. COLVIN, of Cincinnati, N. Y.—*Improvement in Cow Milkers*.—Patent dated May 29, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the extension legs formed of the tubes or hollow legs *a*, containing the slides *b*, in connection with the pins *e*, attached to the springs *d*, which are secured to the tubes *a*, when the above parts thus arranged are applied to a bench A, of the milking device described, for the purposes set forth.

Second. The teat tubes G, when made of conical form or taper form longitudinally, and of an elliptical form in their transverse section, to operate as specified.

Third. The combination of the teat tubes G, levers F, and the pump, the latter being constructed of the conical chambers D, provided with valves *h*, and the semi-cylinder C fitted on the socket B; all being arranged as and for the purpose specified.

No. 28,456.—HORACE H. DAY, of New York, N. Y.—*Improvement in the Manufacture of Elastic Cloth*.—Patent dated May 29, 1860.—The claim explains the nature of this invention.

Claim.—The new elastic cloth described, consisting of the stockinet goods and elastic gum so combined that two sheets of stockinet goods are connected by elastic gum, and the outer face of the fabric presents a gum surface; the said elastic cloth being a new article of manufacture.

No. 28,457.—JAMES DEALLY, of Louisville, Ky.—*Improvement in Keys*.—Patent dated May 29, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the slide D and spring F, with the stem B, in the manner shown and described, so that the key may be elongated when wanted for use, and closed up or shortened when not in use, all as set forth.

No. 28,458.—TRUMAN W. DETRAY, of Montpelier, Vt.—*Improvement in Ferules*.—Patent dated May 29, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The ferule described, when closed at one end, and having an interior swell or projection combined with a wedge projecting inwardly from the closed end, in the manner and for the purpose set forth.

No. 28,459.—ASAHEL K. EATON, of Brooklyn, N. Y.—*Improvement in Rendering Safes Fire Proof*.—Patent dated May 29, 1860.—This invention consists in the use of pure alumina, or the sulphate of alumina, or the double sulphate of alumina and ammonia, as a material to be used for packing between the walls of safes, for the purpose of giving the requisite non-conducting quality.

Claim.—The use of pure alumina, or the substances from which it may be produced, as hereinbefore mentioned and described, in the manner mentioned.

No. 28,460.—WILLIAM H. ELLIOT, of Plattsburgh, N. Y.—*Improvement in Repeating Fire Arms*.—Patent dated May 29, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the employment of a hammer arranged as specified in relation to the frame, in combination with chambers bored entirely through and left open at their rear end, and with a breech plate, as and for the purpose specified.

Second. The employment of a movable exploding point for distributing the force of the hammer among the charges, so as to fire them in a certain order, when said point is employed with, but detached from, a hammer, arranged as specified in relation to the frame.

Third. The arrangement of the head of the firing pin *r*, in the central line or axis of the disk *p*, so that a gliding blow from the face of the hammer upon the head of the firing pin shall have no tendency to revolve the disk, as specified.

Fourth. The employment, between the chamber *j* and the hammer *c*, of a firing pin, or its equivalent, when said pin is so arranged and employed with the hammer that, while it receives a gliding blow from the face of the hammer, it penetrates the cartridge in a direction perpendicular or nearly so to the surface of the shell, as and for the purpose specified.

Fifth. The employment of a stop seat *b*¹, in combination with main seat *b*, when these devices are employed with an exploding point which penetrates the surface of the cartridge, as specified.

Sixth. The employment of disk *p*, firing pin *r*, in combination with a series of stationary barrels arranged around a common centre, when these devices are so arranged that the longitudinal motion of the firing pin within the disk shall be parallel with the axis of the disk and with the bores of the barrels, or nearly so, at set forth.

No. 28,461.—WILLIAM H. ELLIOT, of Plattsburgh, N. Y.—*Improvement in Revolving Fire Arms*.—Patent dated May 29, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the employment of a hammer, arranged as specified, in relation to the barrels, when used independent of a breach pin or nipple, and in combination with chambers bored through at their rear end, and with a breach plate, as specified.

Second. The arrangement of support *n*, in rear of all the barrels, and support *n*¹, in front of all the barrels, in combination with a series of revolving barrels, when said barrels are bored through at their rear end for the purpose of being charged at the breech, as set forth.

Third. The employment of a hammer, arranged and operating as set forth, in combination with a breach plate for resisting the recoil of the cartridge, so as to relieve the breach plate from the pressure of the cartridge shell, as and for the purposes specified.

Fourth. The combination of wedge or cam *j* with fly *f* for raising the hammer, as specified.

Fifth. The employment of lever *k*, in combination with fly *f*, as and for the purpose specified.

No. 28,462.—J. W. EVANS, of Forsyth, Ga.—*Improved Churn*.—Patent dated May 29, 1860.—This invention consists in providing a frame, with suitable gearing, to communicate a reciprocating motion, to which the dasher of an ordinary churn can be attached or detached with facility; the whole forming a churn which can be worked by a laborer by means of a crank.

Claim.—The combination of the above mechanical arrangement with the grated dasher, sash *f*, and set screw *i*, the whole of the devices arranged, as described, for the purposes set forth.

No. 28,463.—CHARLES W. FELT, of Salem, Mass.—*Improved Machine for Setting Type*.—Patent dated May 29, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the general arrangement and organization of the apparatus described, and for the purposes specified.

Second. Imparting the automatic motions described to the T's, or their mechanical equivalents, by means of keys or indicators so arranged and operated that these automatic motions can be given at pleasure to one or more of the said T's, or their mechanical equivalents, as set forth.

Third. The combination of the sliding pieces L L, keys H H, and vibrating bar F, so operating together that the depression of the keys will actuate the T's as set forth.

Fourth. Holding the T's, or their mechanical equivalents, in the same position in which they were sent by the action of the keys, so as to economize their motion, and whereby the keys can be operated quickly, several times in succession, without delay, by the arrangement of devices described, or any other arrangement of devices that will successfully accomplish the desired result.

Fifth. The arrangement of the series of holding hooks *q q*, so operating as to engage with or be disengaged from the T's, and actuated for those purposes, substantially as described.

Sixth. The mode described of producing a registry or record of the T's or of the work performed, the same consisting in forming automatically, by the action of the machine itself, holes, perforations, or indentations in a strip of paper, or other proper material, corresponding to the movements of the keys by the operator.

Seventh. The combination of the T's, in the series of punches, operating in conjunction with each other, substantially as described, whereby the forward movements of the T will so actuate the punches as to produce holes, perforations, or indentations in a strip of paper or other proper material.

Eighth. The arrangement of a series of needles or feelers, so operated by and in conjunction with a register, consisting of a strip of paper or other material having holes, perforations, or indentations formed therein, and so operating upon the T's, or their equivalents, that the same movements can be given thereby to the T's, or their equivalents, as those previously imparted by the operator on the keys, for the purpose specified.

No. 28,464.—CHARLES W. FRICKE, of Mobile, Ala.—*Improved Cement*.—Patent dated May 29, 1860.—This invention consists in mixing, in proper proportions, clean, dry sand, hydraulic cement, and tar, so as to make a mortar suitable to lay brick or stone.

Claim.—The described water-proof composition or mortar cement, for laying brick, stone, &c., compounded substantially as described.

No. 28,465.—RICHARD J. GATTING, of Indianapolis, Ind.—*Improvement in Machines for Breaking and Pulverizing the Soil*.—Patent dated May 29, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, a rotary share frame, provided with shares capable of being adjusted to vary the depth of their cut, as well as to escape or pass over obstructions that may be in their path, substantially as shown and described.

Second. The employment of two sets of shares K, attached to a rotating frame at opposite points of its shaft, to admit of the adjustment of the shares free from the ground when they are not required for operation, and thereby allow the machine to be readily turned and transported from place to place.

No. 28,466.—E. L. GAYLORD, of Terrysville, Conn.—*Improvement in Attaching Bows to Keys*.—Patent dated May 29, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Securing the bows B of keys to their arbors A by means of knobs or heads c, formed on the arbors, grooved longitudinally, and driven snugly into the socket f of the bows, the parts of the bows at the ends of the sockets being then upset to make the sockets snugly encase the knobs or heads, substantially as described.

No. 28,467.—ALBERTUS GEIGER, of Dayton, Ohio.—*Improvement in Vapor Lamps*.—Patent dated May 29, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combined arrangement of the vaporizing tube B, as constructed, and the conducting or wick tube C, together constituting an efficient hydro-carbon gas generator, with the globe holder D, by which the globe holder is rigidly secured for use, as described.

No. 28,468.—W. A. GLIDDEN and A. STARKWEATHER, of Alvaretta, Wis.—*Improvement in Horse Powers*.—Patent dated May 29, 1860.—This invention relates to an improvement in horse power, whereby the draft will be equalized and adapted to the strength of different spans of horses, also the jarring jerking motion, occasioned by starting, will be prevented.

Claim.—The sweeps C E and D F, coupled in the centre, and the braces a b c d and pulleys Q R S T, when specially arranged and operating conjointly as described.

No. 28,469.—R. A. GOODENOUGH, of Brooklyn, N. Y.—*Improvement in Horse Shoes*.—Patent dated May 29, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A shoe for horses and other hoofed animals, having upon its under side an indented ridge, as described, perforated for the insertion of nails at the rim of the shoe.

No. 28,470.—FREDERICK T. GRANT, of Gardiner, Me.—*Improvement in Sliver Machines*.—Patent dated May 29, 1860.—This invention consists in the peculiar construction of the machine, whereby the wood to be manufactured into slivers or fine shavings is firmly held and regularly moved up and brought in contact with the slitters and cutting knife in the sliding block a; also the form and an arrangement of slitters x, whereby the wood is cut or slit in fine and uniform widths, without liability to clogging; also the peculiar form of the lower end of the cap o o attached to the cutter knife c c, whereby the sliver or shaving is curled or twisted.

Claim.—The combination of the feed rolls G G, operated by worms H H, and cam L, or their equivalents, and pressure bars p p, for the purposes specified.

No. 28,471.—S. S. GREENE, of Rome, N. Y.—*Improvement in Shrinking Tire*.—Patent dated May 29, 1860.—The tire is upset or contracted with this machine as follows: The tire is heated to a proper degree at any desirable point, and the heated portion is placed on the buckets E E¹, when the arm C is thrown back. The tire is then clamped hard down by the vise arrangement G, and held in this state. The handle of the lever F is then brought slowly down until the jaws D D¹ clamp the tire firmly to both arms B C. The tire being thus held to the levers B C, and at an intermediate point between them, the handle of the lever F is brought slowly down in the direction of the arrow when the jaws D D¹ will be made to gripe the tire still more firmly, at the same time the end of the arm C will be drawn forward towards the opposite arm B, the jaws holding the tire more and more firmly as the pressure is increased.

Claim.—The arrangement, as shown and described, of the jointed arms B C, jaws D D¹, rod J, lever F, and vise G, for the purpose set forth.

No. 28,472.—OLIVER F. GROVER, of Middletown, N. Y., and HENRY L. PELOUZE, of New York, N. Y.—*Improved Tool for Mitreing Printers' Rules*.—Patent dated May 29, 1860.—This invention consists in the structure, arrangement, and combination of the parts of the mitreing machine by which a machine is produced that is easy to be operated.

Claim.—The attaching B to A, as shown at E E, so as to accommodate the motions of the lever and cutter in their performance, as set forth, the manner of adjusting C; also F, in combination with G, for the purposes set forth.

No. 28,473.—LOREN HALE, of Milford, Massachusetts.—*Improved Cushion for Horses' Feet*.—Patent dated May 29, 1860.—A is the hoof, B the shoe which is bevelled off at a from the point where the shoe is seated on the hoof to its inner edge. C is the hollow elastic pad of

cushion which is thicker in the middle, and is brought down to a thin edge at *b*, and turned up at *c* at the rear end where it presses against the back part of the frog at the foot.

Claim.—An elastic air cushion for protecting horses' feet, substantially as specified.

No. 28,474.—SAMUEL HALL, of New York, N. Y.—*Improvement in Coupling for Shafting.*—Patent dated May 29, 1860.—This invention consists in a ready and direct mode of coupling shafts, or portion of shafting and rods, by the employment of which the same are more compactly and securely held together than heretofore.

Claim.—The use or employment of the cross key *W*, in combination with the longitudinal keys *E E*, and slotted shafts *D D*, said shafts being coupled within the box or clutch coupling composed of the sections *A* and *B*; the whole being arranged and operated as set forth, and for the purpose specified.

No. 28,475.—I. F. HOLLOWAY, of Saline Mines, Ill.—*Improved Steam Traction Engine.*—Patent dated May 29, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the putting of the boiler *C* within a driving wheel or drum *D*, when placed upon friction wheels or bearings within or upon said drum, substantially as described, so that the wheel or drum shall revolve around the boiler.

Second. The inner shell *B*¹ of the driving wheel or drum *B*, in combination with the stationary head *M*, for the purpose of forming a tank, heater, condenser, and jacket, substantially as described.

No. 28,476.—CHARLES L. HARDING, of Winooski Falls, Vt.—*Improvement in Facilitating the Removal of Burs from Wool.*—Patent dated May 29, 1860.—The claim explains the nature of this invention.

Claim.—Subjecting wool, prior to its being submitted to the picking, combing, and carding operations, or either of them, to a sufficient pressure between the loaded rollers, or by means of other contrivance, to destroy the fibrous character of the burs contained in it, substantially as and for the purpose described.

No. 28,477.—L. P. HARRIS, of Mansfield, Ohio.—*Improvement in Apparatus for Clarifying and Evaporating Saccharine Juices.*—Patent dated May 29, 1860.—This invention consists in the construction and application of transverse or oblique partitions to defecating and evaporating pans, said partitions having a series of perforations, or small openings in their lower edges, and being so arranged as to obstruct the onward motion of feculences, which rise to the surface during the process of heating and evaporating, while the liquid beneath it is allowed to pass freely on to the point of escape when drawn from the pan.

The inventor says: I *claim*, first, the double filter, when constructed substantially as described, and its combination with heating and evaporating pans, substantially as and for the purposes set forth.

Second. An apparatus which affords facilities for heating, skimming, filtering, and evaporating saccharine and other juices, substantially as described, and for the purpose set forth.

No. 28,478.—CHARLES H. HASKER, of Portsmouth, Va.—*Improvement in Suspending Boats.*—Patent dated May 29, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the bolt *i*, eyes *j j*, ring *h*, as connected and arranged with the thimble *g* and the gripes *a a*, operated as and for the purposes set forth.

Second. The roving of the one lowering and stopping fall *q* into the bite *t* of the other fall, whereby the lowering of the boat is done by one fall, as described.

Third. The hook *z*, clamp *f*¹, check lines *h*¹, lever *i*¹, with its bars and pin, as arranged, for holding and liberating the falls block, as set forth.

No. 28,479.—S. I. HAYES, of Chicago, Ill.—*Improvement in Making Tubes.*—Patent dated May 29, 1860.—The object of this invention is to apply copper or other soft metal in making the joints between iron tubes and tube sheets in locomotive and other boilers, so as to obtain cheaply all the advantages to be derived from its use.

Claim.—The ferule of copper or other soft metal applied to the exterior of the iron tube, between it and the tube sheet, substantially as and for the purpose specified.

No. 28,480.—JOSEPH M. HEARD, of Aberdeen, Miss.—*Improvement in Pessaries.*—Patent dated May 29, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The construction of the pessary, with its anterior side retreating upwardly to form a support to the bladder, and with its posterior side retreating upwardly to fit the hollow of the sacrum, substantially as described.

No. 28,481.—OTTO HEINIGKE and MORITZ LAEMMEL, of Bay Ridge, N. Y.—*Improved Mosaic Veneers*.—Patent dated May 29, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim*, first, the within described method of producing mosaic veneers from strips of any desired cross section, and of various colors; said strips being formed by pressing a suitable plastic material, which will harden after having gone through the whole process, through openings of required shape, substantially as and for the purpose described.

Second. Uniting the strips, formed, as described, into blocks G, a cross section of which represents the pattern to be represented by the mosaic veneer, or a portion of the same, substantially in the manner and for the purpose specified.

No. 28,482.—JOSEPH C. HENDERSON, of Albany, N. Y.—*Improvement in Stoves*.—Patent dated May 29, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the air spaces *g*, for a descending draft between the fuel hopper and combustion chamber, said draft entering the combustion chamber at the lower end of said air space, as set forth, whereby the descending draft keeps the hopper cool and enters the combustion chamber in a heated state, as specified.

I claim the combination of a hopper for feeding the fuel, with a cone *l*, or contracted chamber, as seen at *q*, for detaining the products of combustion and retaining a sufficient heat for insuring perfect combustion, as set forth.

No. 28,483.—SOLOMON T. HOLLY, of Rockford, Ill.—*Improvement in Seeding Machines*.—Patent dated May 29, 1860.—This invention consists in the use of oblique supporting and driving wheels, arranged so that the same are made to cover the seed and press the earth thereon in different ways as the nature of the case may require to favor the speedy germination of the seed.

Claim.—The oblique supporting and driving wheels B, applied to the machine, and arranged to operate substantially as and for the purpose set forth.

No. 28,484.—NOBLE HILL, of Caton, N. Y.—*Improvement in the Manufacture of Pile Fabrics*.—Patent dated May 29, 1860.—The claim explains the nature of this invention.

Claim.—The new article of manufacture described, constituting a fabric of wool, hair, or other fibres, interwoven with a web of cloth, and treated with one or more coats of elastic varnish, with an exterior lining attached thereto, substantially in the manner and for the purposes shown and described.

No. 28,485.—I. MOORE HENDRICKS, of Philadelphia, Pa.—*Improvement in Rice Hullers*.—Patent dated May 29, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement of the hulling, the scouring, the pearling, the polishing, and the separating apparatus in one frame, substantially as described, for the purpose set forth.

Second. The combination of a layer of cork wood with a layer of buffalo hide, with the hair on, for forming an elastic bed for an outer grinding covering of the hulling cylinder.

Third. I claim the combination of emery and metal filings cemented to duck, or equivalent material, for forming a grinding or rubbing surface.

Fourth. I claim combining with the grinding surface a narrow band wound spirally around the surface of the cylinder, when the ridge formed by the band is of less width than the space between the bands, and when the said ridge and depression are both covered with a material to form a grinding surface, for the purpose as set forth.

Fifth. In combination with a pliable grinding or rubbing surface, I claim an underlayer of buffalo hide with the hair on, for the purpose set forth.

Sixth. The combination of the two screws, revolving in opposite directions, and arranged substantially as described, for the purpose of pearling the rice.

Seventh. The combination of buffalo hide, with the hair outward, with an underlayer of curled hair, for the formation of a polishing pad or brush.

Eighth. In combination with the polishing pad or brush, constructed as described, I claim a narrow band of cloth, or other material, wound spirally around the brush from end to end, and arranged so as to form a depression or groove in the surface of the brush or pad, so as to act as a carrier and assist the brush in conveying the rice through the machine.

No. 28,486.—WILLIAM W. HUBBELL, of Philadelphia, Pa.—*Improvement in Breech Loading Ordnance*.—Patent dated May 29, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination of the screw *c c f*, the parallel gate shaft *j*, and the gate *g*, operating together, as described, so that the gate is moved forward without impinging on the parallel shaft, by the cylindrical front face of the hollow screw, and back as it releases, from the facing of the chamber, when presented on the shaft to the screw.

Second. I claim the curved gate arm *q*, the gate shaft *j*, the gate *g*, and the gate arm *r*, together, in combination with the screw *c c f* and the bearing surfaces *l l* and *t t* of the recess and barrel, so as to conveniently raise a heavy gate of large guns by the leverage of the arm *r* on the shaft of the arm *q*, and regulate the position of the gate in the recess and with the barrel laterally and vertically, to receive the action of the screw *c c f* by means of the bearing surfaces *l l* and *t t*, in the operation of loading, as described.

Third. The circular raised face *h* on the back part of the gate, fitting into the central hollow *f* of the screw, so as to enable the screw to secure this gate so that it cannot be forced up, as described and shown.

No. 28,487.—ALLEN HUGHES, of Gratiot, Ohio.—*Improvement in Cultivating Ploughs*.—Patent dated May 29, 1860.—The object of this invention is to connect the shanks carrying the shovels to the frame or beams of the cultivator in such a manner that the shovels may be raised or depressed, and in fixing the shovels in the shanks and carrying them rigidly to the beams by sector bars having pins passing through them and through the beams.

Claim.—The shovel cultivator described, capable of both a lateral and a vertical adjustment, when made in the manner and by the combined arrangement described and represented

No. 28,488.—LIVERAS HULL, of Charlestown, Mass.—*Improved Ratan Machine*.—Patent dated May 29, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, in combination with the splitting knife and the feeding mechanism, a mechanism for moving the feed rollers *F F*, laterally, relatively to the knife, such mechanism for so feeding the feed rollers consisting of the actuator cam *S* and the slider *I*, furnished with an adjustable arm *p*, the whole operating and being operated substantially as specified.

And, in combination therewith, I claim a mechanism consisting of the stop cam *v*, the lever catch *N*, and its spring *y*, or mechanical equivalent therefor, not only for stopping the operations of the lateral motion machinery immediately after the splitting of a ratan may have been accomplished, but for stopping and holding the actuator cam of such lateral motion mechanism in its proper position for the feeding and splitting machinery to commence action on another ratan.

I also claim applying the actuator cam and its stopping cam, or either, to the shaft *t*, substantially as described, so as to be capable of revolving thereon, and providing the same with devices for producing friction, so as to cause the shaft to revolve the cam when the latter is not held or stopped by the lever catch and stop cam, as described, such devices consisting of the cone *u* and the spring *w*, or mechanical equivalents therefor.

I also claim combining with the slider *I*, of the lateral motion mechanism, an arm *p* and its adjustable devices, arranged to operate substantially in the manner and for the purpose as stated.

I also claim the combination of levers *O P R* and the spring *c¹*, arranged and applied together to the slider *I*, and the shafts of the feed rollers *F F*, substantially as and to operate as stated.

I also claim the arrangement of the strip guides *m* and *n* relatively to the knife and the set of draught rollers *G G*.

No. 28,489.—J. BURROWS HYDE, of Newark, N. J.—*Improvement in the Machinery for Manufacturing Sheathing Felt*.—Patent dated May 29, 1860.—The fibrous material is picked and collected upon a perforated cylinder *C²* by an air exhausting apparatus, causing a current downward through the cylinder which draws the fibres upon the upper part of the cylinder, and which are thence carried through the rollers in the form of an endless bat.

Claim.—The apron *E*, the composition troughs *F* and *1 2* and *3*, the apron and troughs *G*, the rolls *H L* and the rolls *1*, and the sand apparatus *K*, arranged substantially in the manner and employed for the purpose set forth.

No. 28,490.—JOHN JOHNSON, of Naples, Ill.—*Improvement in Corn Planters*.—Patent dated May 29, 1860.—This invention consists in dividing the frame of the machine, arranging the seed device on one frame and the grooved pressing wheels on the other, and connecting the two frames together by a sliding coupling.

Claim.—The combination, with a divided frame *A B*, of the adjustable or extension bar *J* jointed to the front part of the machine and arranged in the manner and for the purposes set forth.

No. 28,491.—ROSS JOHNSON, of Frederick, Md.—*Improved Sash Fastener*.—Patent dated May 29, 1860.—When using this invention as a door fastener, the under portion of the plate *c* with the hook *h* is placed against the side of the door frame, the lower flange *d* being even with the inside front of the door frame; the door is then closed so as to press the hook *h* into the door frame, which fastens the door.

Claim.—The application of the described implement *c j i* as a permanent window sash fastener, in the manner set forth.

No. 28,492.—PERMIN KOPFER, of Fond du Lac, Wis.—*Improvement in Cooling and Setting Tire.*—Patent dated May 29, 1860.—This invention consists of a circular cistern provided with a series of inclined planes in connection with a revolving platform running upon rollers.

Claim.—The described cistern and revolving platform, the former being provided with a series of inclined planes and the latter with a corresponding series of rollers, the whole being constructed, arranged, and operated substantially as set forth, for the purposes specified.

No. 28,493.—LEWIS W. LEEDS and CALVERT VAUX, of New York, N. Y.—*Improved Steam Heating Apparatus.*—Patent dated May 29, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The admission of steam at or near and over all parts of, or a great portion of, the bottom of a steam heater, in numerous thin jets or streams, or, in other words, in a divided state, by a perforated pipe, or its equivalent, substantially as described, whereby an equable diffusion, in any quantity, may be effected through the whole of the heater, for the purpose specified.

No. 28,494.—A. LEIGHTHEISER, of Reading, Pa.—*Improved Washing Machine.*—Patent dated May 29, 1860.—This invention consists in having an ordinary tub A, which is furnished with a brace B across the centre, and is secured into the lugs of the tub by means of small pins C C.

The inventor says: I *claim*, first, the use of two rubber disks with radially curved arms, constructed as described.

Second. I claim the centre piece J furnished with hinged semi-circular lids, turn latches M, radially curved rubbers E K, brace B, and hand cranks F H, the whole arranged and combined for the purposes as set forth.

No. 28,495.—JOHN LOVATT, of Newark, N. J.—*Improvement in Skates.*—Patent dated May 29, 1860.—The power to be obtained by the V-shaped slots in the blocks E E¹, to act directly on the clamping jaws, is great; it is a combination of screw and wedge, and as the blocks E E¹ are made to approach each other in screwing up the rod G, the clamps D D D¹ D¹ contract laterally until they securely gripe the sole of the boot, then the heel clamps begin to move and they gripe the heel with equal security, so as to require no other fastening to the skate.

Claim.—The combination of the movable V-slotted blocks E E¹ with the clamps D D D¹ D¹ and the screw rod G, when the same are arranged substantially in the manner and for the purposes set forth.

No. 28,496.—EDWIN MAY, of Indianapolis, Ind.—*Improvement in Window Grating for Prisons.*—Patent dated May 29, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the platting of tubular iron, the tubes crossing each other at right angles, substantially as and for the purposes set forth.

Second. The bolting together of right angle tubes with the dovetail bolt H, when the same is done for the purposes set forth.

Third. I claim the filling of said tubes with molten iron, in combination with the dovetail rivet H, when all these parts and ingredients are used for the purposes described in the foregoing specification.

No. 28,497.—JOHN MILLS, JR., of Quincy, Ill.—*Improvement in Hemp Brakes.*—Patent dated May 29, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The rotary cleaning and beating beater E¹ arranged over beater E, when the same has also imparted to it a vibratory motion, by the arrangement substantially as described, or by any other suitable machinery, whereby a beating, and, at the same time, a forward motion is given to the hemp, as set forth.

No. 28,498.—J. CAMPBELL MOORE, of Peoria, Ill.—*Improvement in Corn Planters.*—Patent dated May 29, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the jointed bar with the operating cam and spring, arranged substantially as described, so that by bending the central joint, the bar is withdrawn from the cam, the discharge of the seed cut off and the movement of the slide to the seed box arrested.

No. 28,499.—WILLIAM P. PARROTT, of Boston, Mass.—*Improvement in Machines for Crushing Mineral Ores.*—Patent dated May 29, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the described combination and arrangement of one or more sets of crushing rollers $B\ B^1\ C\ C^1$, a sifting or screening apparatus, consisting of a rotary screen S , and its case b^2 , an air blast or blower e^2 , and a discharging conduit k , provided with a separator h , so arranged that, by the conjoint action of gravity and a blast of air, the mineral matters may be separated from the refuse ore; the whole being for crushing ore and separating the metal therefrom, substantially as specified.

I also claim so combining the air blast or fan blower e^2 , and the conduit k , and its separator h , that the same conduit and separator may be adjusted at any desirable angle of inclination relatively to the horizon.

I also claim so combining the rotary screen case b^2 , with the fan blast or blower e^2 , and the conduit k , provided with a separator h , that the air blown through the conduit shall first be made to pass through the rotary sieve, substantially in manner and for the purpose as described.

I also claim combining a regulating air hole c^2 , and plug, or its equivalent, with the case b , of the rotary screen S , and with the fan blower e^2 , applied to operate therewith, and with a discharging conduit k , furnished with a separator h , as specified.

I also claim combining the inclined screen a^3 of the rotary sieve case with the rotary screen S , the regulating air inlet c^2 and the fan blast apparatus e^2 , its conduit k , and separator h .

No. 28,500.—O. J. PENNELL, of Williamsport, Pa.—*Improvement in Apparatus for Renovating Feathers*.—Patent dated May 29, 1860.—This invention consists in the use of a steam boiler, in connection with an air heating device applied to a hollow shaft, provided with radial arms, perforated at their ends, and placed within a cylinder or box, which has ventilating openings provided with flaps or doors.

Claim.—The arrangement and combination of a steam boiler and air heating device applied to the hollow rotating beater shaft H , of a feather receptacle H , substantially as and for the purpose described.

No. 28,501.—HENRY POWELSON, of New Brunswick, N. J.—*Improved Fire Escape*.—Patent dated May 29, 1860.—This invention consists in arranging on the top of a building, or in one of the upper stories, a sliding platform in combination with a rising and falling car, and with suitable chains or ropes in such a manner that by pulling one of the chains, the platform, together with the car, is brought to the edge of the building, and the rope which controls the motion of the car is dropped where it can be reached from any of the windows situated in the same vertical plane with the car or from either story of a building.

The inventor says: I *claim*, first, the arrangement, on the top or in one of the upper stories of a building, of the sliding platform A , in combination with the rising and falling car or basket E , constructed and operating substantially as and for the purposes described.

Second. The combination, with the platform A , and basket E , of the hinged flap G , substantially as specified, for the purpose of dropping the rope F , as the platform advances.

Third. The arrangement of the rope H , with its branches $S^1\ S^2$, &c., in combination with the sliding platform A , substantially as set forth, for the purpose of enabling the inmates of the house to control the apparatus from the several stories of the building.

No. 28,502.—GEORGE W. RAINS, of Newburgh, N. Y.—*Improvement in Governors for Steam Engines*.—Patent dated May 29, 1860.—The object of this invention is to apply the governor in connection with the throttle, or regulating valve, that necessary movement of the valve may be imparted to it by the rotary motion of the governor, and not directly by the act of the change of the planes of revolution thereof.

Claim.—The employment, in combination with a wheel L , having teeth on a portion only of its circumference, applied in connection with the regulating valve, substantially as described, of two teeth or sets of teeth ff and $f^1 f^1$, not forming continuous series on the governor sleeve, the whole arranged and operating substantially as specified.

No. 28,503.—THOMAS S. RAY and A. C. RAND, of Buffalo, N. Y.—*Improvement in Vapor Lamps*.—Patent dated May 29, 1860.—The inventors say: By this device we produce the gas which supplies the burner E , by means of a flame or heat, separate and independent of the light flame or burner E . We also dispense with generators, tubes, and all devices which are dependent upon the light flame for heat, and leave it entirely free and unobstructed.

Claim.—The generating cup F , in combination with the vaporizing tube D , and supply or aperture d^3 , the same being constructed, arranged, and operating substantially as set forth.

No. 28,504.—GEORGE W. RICHARDSON, of New York, N. Y.—*Improved Steam Heating Apparatus for Warming Buildings*.—Patent dated May 29, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* an ascending steam pipe with syphons, constructed and ar-

ranged substantially as described, and with radiators, to which is connected a descending water pipe, the whole forming a continuous open circuit between the steam space and the water space of a boiler.

I also claim, in combination, first, coils, or their equivalent, for radiating heat into apartments; second, syphons, constructed and arranged substantially as described, and making connection between the ascending steam pipes and the coils; and third, ascending steam pipes and descending water pipes, each varying in area, substantially as specified.

No. 28,505.—DANIEL F. SAVAGE, of Boston, Mass.—*Improvement in Dumb Bells*.—Patent dated May 29, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Making the balls of a dumb bell in hollow or solid sections, substantially as set forth, and thus rendering the same capable of being increased or diminished in weight.

No. 28,506.—WILLIAM SCARLETT, of Aurora, Ill.—*Improvement in Skates*.—Patent dated May 29, 1860.—When the plates A, a right and left hand one, are prepared, they are brought together and a stiff piece D, of thick metal, which has previously been cut into the required shape, is interposed between the vertical or runner portions *a* of the plates, and the whole skate is secured together by a suitable number of rivets *h h h*.

Claim.—Combining the central stiffening bar or plate D, with the two sheet metal halves A, in the manner and for the purpose shown and described.

No. 28,507.—HIRAM H. SCOVILLE, of Syracuse, N. Y.—*Improved Machine for Making Mould Boards for Ploughs*.—Patent dated May 29, 1860.—The frame work A is made of strong timbers or iron, the cylinder B is also made of iron having one end of larger diameter than the other, thus giving it a conical form. The cylinder is cut in two parts from end to end, the gudgeons C are attached to the centre of each end of one of the parts. The cylinder B is placed in the frame work so that the gudgeons C may revolve in boxes attached to the frame at D.

Claim.—The use of a conical forming block for shaping mould boards of ploughs when the same is so arranged with the pressure roller, constructed substantially as described, and frame work, as to operate in the manner set forth.

No. 28,508.—FREDERICK SHUTTEE, of Philadelphia, Pa.—*Improved Machine for Cutting Saw Teeth*.—Patent dated May 29, 1860.—This invention consists of two revolving dies, each die being formed of two disks, and both dies having permanent angular projections and recesses, the projections of one die being adapted and gearing into the recesses of the other die, so that a saw blade, submitted to the dies, may have teeth formed on its edge.

Claim.—The two revolving dies, composed of the disks *m* and *n*, and having permanent angular projections and recesses, the projections of one die being adapted to and gearing into the recesses of the other die, as and for the purpose set forth.

No. 28,509.—REUBEN SHALER, of Madison, Conn.—*Improvement in Wheel Skates*.—Patent dated May 29, 1860; antedated February 24, 1860.—This invention consists of a skate, which in the place of the ordinary runner is provided with rollers, the operating surfaces at the periphery of which is made elastic, by which they are made to take a better hold upon the floor or carpet.

Claim.—The skate described, which, in the place of the ordinary runner, is provided with rollers, the periphery of which is made elastic, substantially as and for the purposes set forth.

No. 28,510.—JOHN E. SHIELDS, of Washington, D. C.—*Improved Butt Hinge*.—Patent dated May 29, 1860.—This invention consists of a hinge formed as a tight butt, and having its parts connected by a pin which is capable of removal when the hinge is open and firmly connected with the leaves when closed, so as to prevent removal.

Claim.—The side projection C, on the connecting pin, in combination with the slotted ends of the segments *a a*, and cavities *i i*, in the leaves, arranged and operating substantially as and for the purposes set forth.

No. 28,511.—HENRY K. SMITH, of Philadelphia, Pa.—*Improved Sash Supporter for Car Windows*.—Patent dated May 29, 1860.—A shows the frame of the window, B the sash, C the weighted catch, D the hook into which the lower end of the catch C is received; *a* is the arm of the catch, and *b* the burr or pin of the hook D.

Claim.—The combination, with the window of a railroad car, of the catch C, and hook D, constructed and arranged for conjoint operation in the manner described and for the purpose set forth.

No. 28,512.—**SOLOMON P. SMITH**, of Troy, N. Y.—*Improvement in Car Wheels*.—Patent dated May 29, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, making the inner side of the rim A, with a continuous mid-rib *d*, and a cylindrical or slightly flaring surface at each side of the rib, and the peripheries of the supporting disks F I, with shoulders *h h*, and flanges *j j*¹, as and for the purposes set forth, the said rim and disks being united together by means of compound band packing *k l k l*, in the manner described.

Second. I also claim inclosing the elastic packing *r*, when placed between the tightening device of the holding bolt and the body of the wheel, by means of a ring or recess *q*, follower S, and collar *t*, all constructed and arranged together as described, so that, while the packing is left free to be compressed to any required degree, no part of the packing can be squeezed or worked out of place, nor pressed in contact with the holding bolt.

No. 28,513.—**THOMAS SPENCER**, of Syracuse, N. Y.—*Improvement in the Manufacture of Common Salt*.—Patent dated May 29, 1860.—The claim explains the nature of this invention.

Claim.—Combining the carbonate or bi-carbonate of soda with common salt, substantially as and for the purposes set forth

No. 28,514.—**HENRY J. SPILLER**, of Cincinnati, Ohio.—*Improved Roller Box for Printers*. Patent dated May 29, 1860.—The claim and engravings show the nature of this invention.

Claim.—The ventilating roller box, as described, consisting essentially of roller chamber B, water chamber C, ventilators *d d e*, sliding doors G H, and vertical reels, consisting of stock E, stationary head D, and movable heads C, all constructed and arranged substantially as and for the purpose set forth.

No. 28,515.—Cancelled.

No. 28,516.—**LEMUEL STEPHENS**, of Philadelphia, Pa.—*Improvement in Fertilizers*.—Patent dated May 29, 1860.—The inventor says: My "phuine" consists of the following ingredients and proportions: Decomposed animal matter, 1,200 pounds; animal charcoal, 150 to 200 pounds; sombrero guano, 200 pounds; Peruvian guano, 175 pounds; sulphate of ammonia, 25 pounds; common salt, 100 pounds; solution of bone in muriatic acid, 500 gallons.

Claim.—The "Phuine," made substantially as set forth.

No. 28,517.—**LEE SWEARINGEN**, of Valley River Falls, Va.—*Improvement in Cars for Transporting Cattle, &c.*—Patent dated May 29, 1860.—The claim and engravings explain the nature of this invention.

Claim.—So hinging or connecting a series of partitions with a cattle car body, as that said partitions may be swung into a vertical position to form stalls or apartments to contain horses or cattle, or into a horizontal position for forming an upper and lower compartment for containing sheep or hogs, substantially in the manner and for the purpose set forth.

No. 28,518.—**WILLIAM TANSLEY**, of Salisbury Centre, N. Y.—*Improvement in Bark Mills*. Patent dated May 29, 1860.—The object of this invention is to obtain a grinding mill by which damp or wet bark may be ground with facility and in a perfect manner.

The inventor says: I *claim*, first, the forming of the conical head C, and rims D F of a bark mill, of eccentric sections, substantially as and for the purpose set forth.

Second. The grater E, when formed of a series of alternate concave and convex sections *b* c**, as described.

Third. The crushing teeth *f g*, formed respectively on the arms *a c*¹, when used in connection with the head C, rims D F, and grater E, and placed in the relation thereto, as and for the purpose set forth.

Fourth. The alternate long and short teeth or burrs, 1 2 and 3 4, respectively, on the rim D, and conical head C, as and for the purpose specified.

Fifth. The combination of the head C, rims D F, and grater E, arranged within a case A, for joint operation, substantially as and for the purpose set forth.

No. 28,519.—**JOSEPH R. THOMAS**, of Williamsburgh, N. Y.—*Improvement in the Mode of Securing Lids on Gas Retorts*.—Patent dated May 29, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Providing one end of the bar D, with a double taper socket *d*, and pivoting said end upon a pintle *c*, so that said bar may be swung horizontally and also vertically upon the pintle, as and for the purpose shown and described.

No. 28,520.—JOHN THOMPSON, of East Boston, Mass.—*Improvement in Locomotive Boilers.*—Patent dated May 29, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The improved smoke box, as so extended beyond the smoke current leading from the pipe stack to the chimney, that the sparks or cinders discharged through the pipe stack may pass out of and beyond the current of smoke, so as to be deposited in the box by the action of gravity and not be carried up the chimney.

No. 28,521.—THOMAS TOWNDROW, of New York, N. Y.—*Improvement in Book Binding.*—Patent dated May 29, 1860.—The object of this invention is to produce a binding of durable and convenient character, adapted to permit the book to be taken apart for the insertion or removal of leaves in any part, and particularly applicable to the binding of common place index and memoranda books, catalogues, sheet music, and the like.

Claim.—The combination of the plates A and A¹, tubes B, and pins C, constructed and arranged substantially as and for the purposes set forth.

No. 28,522.—JOHN G. TREADWELL, of Albany, N. Y.—*Improvement in Stoves.*—Patent dated May 29, 1860.—This invention consists in constructing and arranging the different parts of the stove.

Claim.—The employment of the corrugated or plain front plate D, perforated as described, the close fitting doors E E, and slide F, when used in connection with the double sides G G¹, and the perforated air chamber at the rear of the fire, substantially as and for the purpose specified.

No. 28,523.—R. P. VAN HORNE, of Gratiot, Ohio.—*Improvement in Cultivators.*—Patent dated May 29, 1860.—This invention consists in a novel arrangement of tooth bars attached to a plate, the latter being connected to a bar provided with adjustable wheels, whereby the desired end is attained.

The inventor says: I *claim* the arrangement of the plate A, draught bar B, tooth or share bars K, and truck or wheel bar D, substantially as and for the purpose set forth.

I further claim, in connection with the plate A, draught bar B, share bar K, and truck or wheel bar D, the transverse bar M, provided with teeth or shares N, substantially as and for purpose specified.

No. 28,524.—J. H. G. D. WAGNER, of Paris, France.—*Improved Filtering Apparatus.*—Patent dated May 29, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, removable horizontal shelves p, the bottom and top surfaces of each of these shelves being provided with flanges on three sides, and the shelves being placed in relation to each other, as shown on plate 1, in combination with a steam tight box B, water reservoir A, and stop cock o, substantially as and for the purposes set forth.

Second. Disks m, provided with circular flanges on top and bottom with sockets m¹, and central holes, in combination with disks n, provided with sockets n¹, all the disks being placed in a steam tight box B, and in relation to each other, as represented on plate 2, substantially as and for the purposes set forth.

Third. Shelves, the top and bottom surfaces of each of which are provided with flanges on three sides, combined with a steam tight box B, and surrounding jacket C¹, as represented on plates 3 and 4, substantially as and for the purposes set forth.

No. 28,525.—ALVIN WARTH, of New York, N. Y.—*Improved Fire Escape.*—Patent dated May 29, 1860.—This invention consists in arranging a tube, combined with a pin passing through the same, in combination with a rope in such a manner that by straining the rope its friction in the inside of the tube is increased, and that weights attached to said tube can be let down from any height with a moderate speed; also in the arrangement of a number of loops and hooks attached to a curved tube furnished with a pin and working in combination with a rope, so that said tube affords the facility to attach to the same a number of persons, or articles to be saved at the same time.

The inventor says: I *claim*, first, the arrangement of a tube A or A¹, substantially as described, in combination with a rope a, in such a manner that, by straining the rope, its friction on the inside of the tube is increased, and that weights attached to said tubes can be let down with any desirable speed.

Second. Arranging the tubes A A¹, with a number of hooks c, and loops d, substantially in the manner and for the purpose specified.

Third. The combination, with the rope a, and tubes A A¹, of a derrick D, constructed of standards i, hooks j, lever k, and cross bar l, substantially as and for the purpose set forth.

No. 28,526.—MAXIMILIAN WAPPICH, of Sacramento, Cal.—*Improved Water Elevator*.—Patent dated May 29, 1860.—The nature of these improvements is explained by the claim and engravings.

The inventor says: I *claim*, first, sustaining and buoying the screw elevator by a water chamber exterior to the shell of the screw, either in connection with the air chamber or without it, substantially as described.

Second. Regulating the admission of the water by the lip j^1 , constructed and operated as described.

Third. The arrangement of means for suspending the upper end of the elevator set forth.

Fourth. The ring e^1 , and the means connected with it for packing and guiding the lower end of the cylinder, as described.

Fifth. The frame b^1 , as constructed and arranged, and for the purposes set forth.

No. 28,527.—JOHN B. WINSLOW, of Charlestown, Mass.—*Improved Machine for Cutting Mouldings*.—Patent dated May 29, 1860.—By the feed roll and the lower extremities of the stationary cams r , and the convex face of the back guide 8, serpentine forms of almost any intricacy when once entered, are guided through the machine either automatically, or with a very slight directing motion by the hand of the operator, and a moulding of any desired form is cut upon their upper exterior edge by the rotary cutters.

The inventor says: I *claim*, first, the combined action of the cams or guides r , and the self-adjusting feed roll h , or their equivalents, substantially as described.

Second. I claim the adjustable back guide 8, acting with the cams or guides r , and the feed roll h , or their equivalents, substantially as described.

Third. I claim the connecting rods or wires 15, or their equivalents, arranged in the machine substantially as described, whereby the action of the springs x , is changed from the feed roll h , to the compressure rolls 12, for the purposes set forth.

No. 28,528.—D. M. WOODIN, of Brandon, Wis.—*Improved Churn*.—Patent dated May 29, 1860.—The claim and engravings explain the nature of this invention.

Claim.—So arranging the two dasher shafts, which are provided with wings secured to them in a screw or spiral form, that by revolving one, the other will be revolved by it, the wings interlapping, pressing against each other and expressing the butter from the cream, as the bearings change from bottom to top, or vice versa, substantially as specified.

No. 28,529.—STEPHEN W. WOODWARD, of Buffalo, N. Y.—*Improved Washing Machine*.—Patent dated May 29, 1860.—A is a cylindrical tub forming the body of the machine into which the clothes are to be put to be washed; it is fluted or corrugated upon the inside at A^1 . B represents a vertical shaft which has a step, or bearing, in the bottom of the tub at c . H shows the spring flaps, or rubbers, which are connected to the fluted disk F by the journal pin h^1 , and to the plate G by the journal pin h^2 .

The inventor says: I *claim*, first, the combination of the stationary tub A, rotary shaft B, and rotary disk F, placed beneath and supporting the clothes; the whole being constructed, arranged, and operated in the manner and for the purpose set forth.

Second. The spring rubbers H, in combination with the revolving disk F, substantially as set forth.

No. 28,530.—WILLIAM C. ALLISON, of Philadelphia, Pa., assignor to ALLISON & MURPHY, of the same place.—*Improvement in City Railroad Cars*.—Patent dated May 29, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A seat composed of a series of transverse truss frames, constructed and connected together as set forth, when the said seat is arranged on, and combined with, the arched roof of a railroad car, in the manner and the purposes specified.

No. 28,531.—WILLIAM A. BACON, of Campello, Mass., assignor to himself and MARCUS V. REYNOLDS, of said Campello.—*Improved Machine for Skiving Counters for Boots and Shoes*. Patent dated May 29, 1860.—In connection with the feed wheel, the frame and the standard E, a rocker, or lever knife F is employed; it is so applied to the block H as to enable the angle of its cutting edge f , with respect to the periphery of the feed wheel to be varied as circumstances may require. At the angular bend g of the knife a screw h passes down through the knife and is screwed into the block H, the head of the screw resting on the upper surface of the knife.

Claim.—The arrangement of the adjustable block H, with the feed wheel C, raised above the table, and with the knife F, provided with adjusting screws, and supported by such block, as described.

No. 28,532.—ALBERT BROUGHTON, of New York, N. Y., assignor to himself, ALEXANDER LINDSEY, and JOHN R. PLATT, of said New York.—*Improvement in Machinery for Grinding*

and Polishing Glass, &c.—Patent dated May 29, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the rotary adjustable shaft I, revolving disk J, and independent pivoted disks K K K, with the horizontally reciprocating bed C, and mechanism for effecting the intermittent oscillating motion of gear shaft E, which reverses the movement of the travelling bed, arranged and operating in the manner and for the purpose shown and described

No. 28,533.—LEWIS S. CHICHESTER, of New York, N. Y., assignor to F. S. CABOT, of said New York.—*Improvement in Filters.*—Patent dated May 29, 1860.—Within the case A a concave perforated plate *h* is fitted. This plate is supported at a suitable height by the lugs *i*, which are attached to it and rest on the bottom plate *b*, and on the concave *h* a perforated convex plate *i* is placed. The plates *h i* are of equal diameter, and are somewhat less than the inner diameter of the body of the case in order to allow a space *j* between the edges of the plates and the inner side of the case.

Claim.—The combination, in the manner shown and described, of the plates *i h*, and the filtering materials, with the adjustable plates *a d*, when all the said parts are constructed substantially as set forth, so that by adjusting either of the plates *a d* filtered or unfiltered water may be obtained at pleasure, as specified.

No. 28,534.—G. P. DANCE, of Columbia, Texas, assignor to himself and J. H. DANCE and D. E. DANCE, of said Columbia.—*Improvement in Hanging Mill Stones.*—Patent dated May 29, 1860.—The claim and engravings explain the nature of this improvement.

Claim.—The driver D, provided with a taper, square opening *c*, at its centre, fitted in the runner A, and resting on a rocking key C, in the spindle, the latter passing through the taper opening of the driver, substantially as and for the purpose set forth.

No. 28,535.—THOMAS G. HAROLD, of Brooklyn, N. Y., assignor to himself and JAMES H. HAROLD, of said Brooklyn.—*Improvement in Guards for Key Holes.*—Patent dated May 29, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The blocking piece *a*, fitted on the bar *b*, in combination with the sliding blocking piece *c*, that enters the key hole and prevents the piece *a* being turned, or picks entered into the keyhole, as set forth.

No. 28,536.—SAMUEL W. LOWE, of Philadelphia, Pa., assignor to himself, CHARLES WINGMAN and D. S. JOHNSON, of the same place.—*Improvement in Vapor Lamps.*—Patent dated May 29, 1860.—This invention consists in providing a fluid burning lamp with a woven wire bag, or case, packed with raw cotton or other equivalent fibrous material, in connection with the wick of the lamp, whereby the fluid being absorbed and held suspended within the wire gauze case all danger of scattering its contents is prevented.

Claim.—The woven wire bag or case B, the fibrous packing D, and the wick C, when the same are arranged and combined together in a lamp, substantially as and for the purposes set forth and described.

No. 28,537.—S. E. PETTE, of Philadelphia, Pa., assignor to the NORTH AMERICAN PAPER BAG AND ENVELOPE MANUFACTURING COMPANY, of said Philadelphia.—*Improvement in Sewing Machines.*—Patent dated May 29, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim, first, locating the rotating paster F^1 , so as to apply the paste directly to the edge of the paper in forming the tube, as set forth.

Second. Giving to the paster F^1 a velocity corresponding with that of the edge of the paper on which it applies the plate by means of the ratchet arrangement, operated as described, and for the purpose stated.

Third. The slide Q^2 , constructed and operating substantially as and for the purpose specified.

Fourth. Feeding the tube of paper to the knife by the alternating operation of the reciprocating clamps $V V^1$, as specified.

Fifth. The clamps $V V^1 V^2$, constructed as set forth, and operating them by darts and dogs, as described.

Sixth. Folder and paster H, constructed and operating substantially in the manner stated.

Seventh. In combination with the paper bag machinery, attaching the connecting rods which operate the slides and clamps to opposite crank centres, to secure a continuous feed of the tubing to the knife, as described and shown.

Eighth, and finally. I claim the general arrangement of the parts of the machine described, for performing the various operations of making the bags, in the order and manner set forth and shown.

No. 28,538.—HAMILTON RUDDICK, of Boston, Mass., assignor to himself and JONATHAN PEIRCE, of said Boston.—*Improvement in Sewing Machines*.—Patent dated May 29, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Adjusting the length of the crank *e* by means of the slide, or its equivalent, in combination with the feed lever *b*, vibrating on the adjustable fulcrum *d*, in order to cause said feed lever to pass a greater or lesser distance above the surface of the table or cloth plate, substantially as and for the purpose specified.

No. 28,539.—THOMAS SHAW, of Philadelphia, Pa., assignor to himself and L. N. BROGNARD, of said Philadelphia.—*Improvement in Furnaces for Burning Coal Oil or other Hydro-Carbon Fluids under Steam Generators*.—Patent dated May 29, 1860.—This invention consists in using any ignitable fluid as a fuel for generating steam, by discharging it into the fire chamber of a steam boiler, and upon a body of ignited coal, or its equivalent, through a pipe surrounded by water contained in the boiler; also in a perforated tube, and a box communicating therewith.

The inventor says: I *claim* the conveying of ignitable fluids to the interior of the fire chamber, by means of a pipe surrounded by water within the boiler, substantially as and for the purpose set forth.

I claim saturating the air with vapors of a fluid, by means of the perforated tube *H*, and its box *h*, when arranged in respect to the fire chamber of the steam boiler, substantially as set forth.

I claim the bars *n* and *n*, arranged in respect to the grate bars and fire chamber, substantially as and for the purpose set forth.

No. 28,540.—GEORGE E. VANDERBURGH, of Mamaroneck, N. Y., assignor to the LIQUID QUARTZ COMPANY, of New York, N. Y.—*Improvement in the Preparation of Soluble Silicates*.—Patent dated May 29, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Reducing silicious substance to a liquid state by first incorporating therewith a small proportion of some alkaline substance, and then subjecting the same to the direct action of super-heated steam whilst inclosed within a suitable vessel, substantially as set forth.

No. 28,541.—GEORGE E. VANDERBURGH, of Mamaroneck, N. Y., assignor to the LIQUID QUARTZ COMPANY, of New York, N. Y.—*Improvement in Silicated Cements*.—Patent dated May 29, 1860.—This cement is prepared from a liquid silicate that is produced by the method described in the preceding invention.

Claim.—A silicious cement prepared substantially in the manner set forth

No. 28,542.—ELBRIDGE WEBBER, of Gardiner, Me., assignor to himself, G. W. WAITT, of said Gardiner, and N. B. STARBUCK and G. H. STARBUCK, of Troy, N. Y.—*Improved Marine Propeller*.—Patent dated May 29, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The construction of propellers with the two blades *B B*¹, as described, and placed at about an angle of 45° with the axis of shaft on opposite sides of a plane through said axis, and altogether forward of the rear extremity of the hub, substantially as set forth.

No. 28,543.—GEORGE NOCK, of Pittsburgh, Pa., assignor to THOMAS G. NOCK, of Windsor Locks, Conn.—*Improvement in Desulphurizing Coke*.—Patent dated May 29, 1860.—The claim explains the nature of this invention.

The inventor says: I *claim* the use of a mixture of an oxydizing agent such as peroxide manganese, nitrate of potash, or other substance which yields oxygen at an elevated temperature in contact with carbon, with an aqueous solution of chloride of sodium, or other alkaline chloride, or chloride of alkaline earth, in the process of desulphurizing coke, as described. Also in a mixture of peroxide of manganese or other substance, which yields oxygen at an elevated temperature in contact with carbon and colophony (or rosin) or other easily combustible substance, with an aqueous solution of chloride of sodium (common salt) or other alkaline, chloride, or salt of an alkaline earth, for the purpose of desulphurizing coke, in the manner described.

No. 28,544.—P. W. ADAIRE, of Hay's Creek, Miss.—*Improvement in Ditching Machine*.—Patent dated June 5, 1860.—The setting of the wheel *B* into the earth causes the earth to enter and fill the boxes *C*, while the plough *I* separates the earth, and causes that portion of it which fills the boxes to pass up with the wheel in front of shield *B*, until it reaches the top of the wheel when the guide piece *e*¹ is elevated by the stationary cams *C C*¹ attached to the pieces *A*² *A*², whereby the false bottoms *c* are forced out even with the side cutters *a a*, thus shoving the earth into the spout *D* down, which it descends by its own gravity, until it lands on the endless conveyor *D*¹, by which it is carried up and off at the side of the machine.

Claim.—The combination of the frame *A*, and adjustable standards *E E*, with wheel *B*,

circular cutting plates *a a*, cross pieces *b b*, false bottoms *c*, guide pieces *e¹*, cams *C¹ C¹*, guide or shield *B¹*, plough *I*, and operators *H*, arranged and operating in relation to each other as and for the purposes set forth.

No. 28,545.—M. C. ANDREWS, of Lawrence, Mass.—*Improvement in Swinging Bolsters for Railroad Car Trucks*.—Patent dated June 5, 1860.—This invention consists in the combination of semi-circular friction blocks, with the truck frame, the bolster, and its pendulous links; also an improved mode of making the swinging bolster, viz: with an elastic step for the central pivot, and with the parts composing the bolster capable of springing together.

The inventor says: I *claim* the combination of the friction blocks with the truck frame, the swinging bolster, and its pendulous links, the same being for the purpose described.

I also claim the application of the elastic step to the bolster, in connection with so constructing the bolster that it may be capable of springing together, substantially in manner and for the purpose as described.

No. 28,546.—WILLIAM J. ANDREWS, of Columbia, Tenn.—*Improved Sad Iron Heater*.—Patent dated June 5, 1860.—This invention consists in constructing a rack of hollow metal tubes, of a suitable strength and arrangement, in such a manner that the tubes will serve to hang the rack to the top bar of an ordinary grate, and to conduct hot air through them from the fire, and give out heat to the iron or irons that are placed on the rack independently of the direct heat the bottoms of the irons receive from the fire; and in combining with such a rack a guard plate for protecting the irons from burning or being smoked.

Claim.—The described rack for sad iron heaters constructed and operating in the manner substantially as described.

No. 28,547.—JOHN ARMOUR, of Helena, Ark.—*Improvement in Sharpening Shears*.—Patent dated June 5, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* forming a narrow slit from the bottom of the notch in the spreader and sharpener *B*, into the body of the same, and then bringing the sides of said slit into close contact with each other before tempering the said spreader and sharpener, substantially in the manner and for the purpose set forth.

I also claim combining the spreader and sharpener *B* with the hand block *A*, when the adjustable segment *C* is combined with said block, substantially in the manner and for the purpose set forth.

No. 28,548.—T. G. ARNOLD, of New York, N. Y.—*Improvement in Drop Light Joints*.—Patent dated June 5, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the construction of the socket of a drop light joint of a single piece, substantially as described.

Second. The employment, in combination with the socket *A*, of a drop light joint for gas burners, made in one piece, and the elastic lining *d* of a screw ring *e*, fitted to a screw thread inside of the said socket, substantially as and for the purpose specified.

No. 28,549.—EDWARD H. ASHCROFT, of Boston, Mass.—*Improvement in Apparatus for Naphthalizing Gases*.—Patent dated June 5, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the combination of the gas-receiving and expanding chamber *F*, with the naphthalizing cistern, scroll, and float, as specified.

Also the above described arrangement and application of the float, scroll, and disk, whereby they are rendered capable of easy and proper adjustment, as explained.

Also the combination of one or more propelling wings, or the equivalent thereof, with the scroll and float, when applied and used within a cistern, substantially in manner and for the purpose as described—such propelling devices being to facilitate or effect the rotation of the said float and scroll while being buoyed within the liquid, as described.

Also the application and arrangement of the foraminous diaphragm with respect to the cistern and eduction pipe of the apparatus, as described.

No. 28,550.—CYRUS AVERY, of Tunkhannock, Pa.—*Improvement in Gearing for Horse Powers, &c.*—Patent dated June 5, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, constructing the main wheel *C* in the form of a cone, and each section with a narrow periphery, the teeth on the lower intermediate wheels *A A A* running under a part of the main wheel *C*, which is smaller than the part which they take into, following the same arrangement up to any number desired, the upper series held down by the top or cover *D*, the whole constructed and working as specified.

Second. The peculiar construction, combination, and operation of the intermediate wheels *b b b*, the main wheel *c*, and the centre pinion, Fig. 7, both when at rest and in motion, substantially as specified above.

Third. The manner in which the main shaft is held in position, namely, by the intermediate wheels taking into the main wheel and into the centre pinion, thus enabling me to dispense with all bearings except the stepping.

Fourth. The manner of seating the driver, namely, putting a post through the cover and main shaft into the step, and a seat on top of this post that will revolve or stand stationary at the driver's pleasure.

Fifth. Giving the band wheel K an increased velocity of one revolution over and above the velocity imparted by the tumbling shaft M, by means of the cogged or milled stationary concave wheel or ring N, Fig. 8, one or more intermediate wheels, Fig. 8, revolving on their own axis and the centre pinion wheel L, Fig. 9.

Sixth. Having one end of the band wheel shaft in the end of the tumbling rod and revolving the same way.

Seventh. Having the whole machine shut up tight by the way it is constructed without boxing.

No. 28,551.—WILLIAM B. AVERY, of Cambridge, Mass.—*Improved Fire Escape*.—Patent dated June 5, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination and arrangement with a grapple, constructed with pivotted holding dogs *o o*, of the reels E and I, when these latter are hung by a shaft *a*, in links *g*, adjustable in position as described, and provided with a crank chain *c* and brakes, all operating to regulate and control the position and descent of the car *d*, substantially as described.

No. 28,552.—LEOPOLD BENNETT, of Pittsburgh, Pa.—*Improved Steam Valve*.—Patent dated June 5, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the construction of a valve, oscillating or working in the same manner as a cock, with the steam passage transversely through it, and the exhaust through it, in the direction of its length, as in the manner described by reference and drawings, my object being to relieve the steam valve as far as possible from unnecessary friction. The valve can be worked by any ordinary eccentric or cam, or any of the usual appliances for working slide or poppet valves.

No. 28,553.—JOEL BOWMAN, of Somerset, Ohio.—*Improvement in Machines for Dressing Millstones*.—Patent dated June 5, 1860.—This invention consists in combining with a dressing machine a device whereby the depth of cut can be instantaneously regulated by the operator during the running of the machine.

Claim.—The application to the lever G of the graduating device, consisting of rocking bar *n*, with arms *q*, connected with sliding frame *t x*, in combination with springs *p* and *v*, the arrangement and operation being substantially as set forth.

No. 28,554.—JOSEPH BRAKELEY, of New York, N. Y.—*Improvement in Machines for Separating the Qualities of Bark*.—Patent dated June 5, 1860.—This invention consists in the use of a cutter, pressure roller, and an adjustable bearing.

Claim.—The combination of a saw or cutter D, rotary or reciprocating, a pressure roller L, and adjustable bearing plate O, with or without rollers Q, all being arranged and applied to a bark mill, substantially as and for the purposes set forth.

No. 28,555.—HENRY BRANDT, of Columbia, Pa.—*Improvement in Bending Teeth for Horse Rakes*.—Patent dated June 5, 1860.—By taking hold of the lever handle K, affixed on its pivot F, the wire is speedily bent with ease and uniformity to any shape or curve desired by making the corresponding curves of the bender and lever of said curve.

Claim.—The bender A, with its flange B, raised end G, guides E D, pivot F, and braces C e e, in combination with the flanged and grooved curved lever K L M N, made substantially as set forth, for the purpose specified.

No. 28,556.—GEORGE C. BROWER, of New Orleans, La.—*Improvement in Gas Torches*.—Patent dated June 5, 1860.—This invention consists in making or placing a reservoir for alcohol at the outer end of a crook made to pass into the top of a gas shade.

Claim.—A gas torch, constructed substantially as described and represented.

No. 28,557.—ROBERT BRYSON, of Schenectady, N. Y.—*Improvement in Harvesters*.—Patent dated June 5, 1860.—This invention consists in suspending the finger bar by the combined agency of an inclined or vertical bracket, a cylindrical cross head, and a vertical socket plate.

Claim.—The combination of the finger bar, having a bracket K and axial cross head *c*, with the socket plate L, of the frame A, the whole constructed and arranged and operating in the manner and for the purpose described.

No. 28,558.—THACKER V. BUSH, of Gallatin, Tenn.—*Improvement in Houses for Preserving Roots*.—Patent dated June 5, 1860.—The claim and engravings explain the nature of this invention.

Claim.—In combination, with the outer walls and covering, a series of inner compartments, which inner compartments are surrounded by and covered over with dry earth as a filtering medium between the roots and the external air, for the purpose of storing and preserving said roots, substantially in the manner described.

No. 28,559.—DEXTER H. CHAMBERLAIN, of West Roxbury, Mass.—*Improved Feed of Leather Splitting Machines*.—Patent dated June 5, 1860.—The claim and engravings explain the nature of this invention.

Claim.—In combination with a rigid feed roll B, the presser roll, composed of independent disks or sections *d*, confined in a suitable receptacle or trough E, and pressed towards the roll B by pressure applied independently to each disk, substantially as described, for the purpose specified.

No. 28,560.—SIMON G. CHEEVER, of Boston, Mass.—*Improvement in Machines for Mixing Paints*.—Patent dated June 5, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the collars which hold and move the mixers or beaters in their relation to each other, and the actuating parts, so that while the middle series move in one direction the outer and inner series shall move in the other, in combination with the central curved blades attached to the central shaft, all moving and operating substantially as set forth.

No. 28,561.—SOLON A. CLAPP, of Hamilton, Ill.—*Improvement in Machines for Packing Flour*.—Patent dated June 5, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of spring ring or short cylinder *o* with hooks *m*, an inner cylinder *l*, a frame *h s*, and upright rods *h*, for the purpose of expanding the upper end of the sack turning and twisting while being packed, substantially as set forth.

No. 28,562.—SEWARD P. COBB, of South Danvers, Mass.—*Improved Machine for Finishing Leather*.—Patent dated June 5, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, in combination with the tool and the vibrator, a mechanism substantially as described, by which, while the vibrator may be at rest, or nearly so, the angular position of the finishing tool relatively to the bed may be varied as described, such mechanism being the tilting plate *b* and its sectoral lever *i* and click applied to the vibrator and operated by a hand lever, as specified.

And, in combination with the tilting plate *b* or tool holder and the vibrator D, I claim a mechanism, substantially as described, by which, while the vibrator may be in motion, the tilting plate may be moved on its fulcrum so as to change its angle with the bed, such mechanism being the slider *o* and the slotted lever I, applied to the vibrator, the arm *n*, and the frame of the machine, in manner and so as to operate substantially as explained.

I also claim the combination and arrangement of the four cams K L M N, their connections and operating screws, the same being for the purposes as specified.

No. 28,563.—HENRY CRANE, of New York, N. Y.—*Improved Bridle Bit*.—Patent dated June 5, 1860.—This invention consists in the employment of supplemental bars placed within the principal one and having springs attached, the parts being so arranged as to admit of the action of the supplemental bars on the lower jaw of the animal in case of the latter grasping with its teeth the principal bar.

Claim.—The combination of the bars A C C, the latter being fitted with the bar A, connected by a joint *a* at their inner ends and having a spring F attached, substantially as shown and described, for the purposes specified.

No. 28,564.—JOHN DICKSON, JR., of Brooklyn, N. Y.—*Improvement in Hat Conformatures*.—Patent dated June 5, 1860.—The claim and engravings explain the nature of this invention.

Claim.—In combination with the hat conformature, constructed as described, the sizer *f* formed of two metallic strips connected to the ends of one of the extension bands *e*, to measure the size of hat, regardless of the shape, at the same time that said shape is taken by said conformature, as specified.

No. 28,565.—THOMAS S. DISSTON, of Philadelphia, Pa.—*Improved Machine for Making Cross Cut Tabs*.—Patent dated June 5, 1860.—This invention consists in certain devices for

cutting from a bar of iron a piece of sufficient length and width to form the required tab, bending the said strip, forming an eye and flanges on the same, and punching and otherwise completing the tabs.

The inventor says: I *claim*, first, the box P, its dies N and N¹, the movable pin L, and the pressure bar m, the whole constructed, arranged, and operated as and for the purpose set forth.

Second. In combination with the above, the plate R, with its cutting projections arranged in respect to box P, as described.

Third. The bar W, with its projection x, in combination with the pin L and its projection e, and the inclined bar g, the said bar W being operated by the appliances described, or their equivalents, and the whole being arranged for joint action, substantially as specified.

Fourth. The slide M, its levers f and f¹, and their projections h and i, in combination with the orifices in the slide K, and the stationary inclined bars j j, the whole being arranged and operating substantially as and for the purpose set forth.

No. 28,566.—HENRY EHRMAN, JOSEPH H. EHRMAN, and HENRY H. EHRMAN, of Annville, Pa.—*Improved Washing Machine*.—Patent dated June 5, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the journal boxes or bearings BB with the concave E, springs d, and rods D, as shown and described, so that the said bearings, rubbing cylinder, concave, and springs, may be all simultaneously removed, as set forth.

No. 28,567.—H. C. FAIRCHILD, of Brooklyn, Pa.—*Improvement in Seed Planters*.—Patent dated June 5, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The partition F introduced into the cylinder A, for separating the seed, in combination with the plates G G¹ and G², the plate G, being provided with projecting lugs i, forming a channel for dropping the pumpkin seed as the plate is semi-rotated, the whole being arranged and operating simultaneously with the plunger C, as and for the purposes set forth.

No. 28,568.—JAMES M. FISH, of Buffalo, N. Y.—*Improvement in Machines for Weighing and Bagging Grain*.—Patent dated June 5, 1860.—This invention relates to the construction of a portable grain bin having an appropriate spout upon either side to facilitate the process of discharging the grain or other produce into bags after it is weighed, and the combination of such grain bin with a portable platform weighing scale.

Claim.—The arrangement of the bin A, doubly inclined floor O, vertical gates D, spouts L, frame B, and scale L, the whole being constructed and combined substantially in the manner and for the purposes explained.

No. 28,569.—E. L. FOOTE, of Springfield, Ill.—*Improvement in Rock Drills*.—Patent dated June 5, 1860.—A represents the main frame of the machine; in the main frame there is a movable frame B placed and arranged so as to slide up and down upon the ways or guides c c made fast to the main frame; the upper end of these ways c are joined together by means of the head frame D; upon the frame B a pair of supporters H H are erected for the purpose of supporting the shaft G upon which are fixed two cams I I¹.

The inventor says: I *claim*, first, the combination of the heads v with the stop guides e, cams I, and the drill bars F, when the whole is constructed and arranged substantially as described.

Second. In combination with the drill bars F the adjustable guides h h and c c, when constructed, arranged, and operated in the manner and for the purpose specified.

No. 28,570.—WADE H. GILBERT, of Bayou Goula, and H. O. AMES, of New Orleans, La.—*Improvement in Apparatus for Evaporating Saccharine Juices*.—Patent dated June 5, 1860.—The object of this invention is to so construct and arrange an open steam train as not only to provide for the perfect defecation of the juice in the defecator, but to obviate the defects in the ordinary steam train.

Claim.—The connected steam train, composed of a series of open pans arranged and connected by "monte-jus," substantially as and for the purposes specified.

No. 28,571.—AMOS GLOVER, of Powhatan Point, Ohio.—*Improvement in Corn and Cob Crushers*.—Patent dated June 5, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the construction of the concave o with one or more receiving spaces j.

Second. Combining crushers with millstones by means of the driver m, substantially as and for the purposes set forth in this specification.

No. 28,572.—JAMES GREEN, of Kennett Square, Pa.—*Improvement in Seed Planters*.—Patent dated June 5, 1860.—This invention consists in the combination of stationary and sliding collars, slotted tube, pins, rod, and grooved nut, for the purpose of forming adjustable seed distributing receptacles.

Claim.—The combination of stationary and sliding collars A B, slotted tube C, pins E, rod o, and grooved nut M N, for the purpose of forming adjustable seed distributing receptacles, substantially as set forth.

No. 28,573.—SAMUEL HALL, of New York, N. Y.—*Improvement in Coupling for Shafting*.—Patent dated June 5, 1860.—This invention consists in the arrangement and construction of a new mode of coupling shafts, shafting rods, or other articles, to which the same can be applied, by which economy of time and labor is gained, and the shafts, shafting rods, or other articles coupled are held together and secured in a strong manner.

Claim.—The cross key D, in combination with the slotted shafts B B, coupled within the centre hub or coupling A, by means of the longitudinal keys E E, arranged and operated as described and for the purpose as specified.

No. 28,574.—JOHN S. HARPER, of Baltimore, Md.—*Improvement in Core Boxes*.—Patent dated June 5, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A core box which is capable of being expanded and contracted in diameter in the manner described, by the use of two or more toothed bands with catches and figures to designate the size of core required, in connection with the open cylinder, or in any other way substantially the same and which will produce the intended effect.

No. 28,575.—WILLIAM A. HARRIS, of Providence, R. I.—*Improved Heel Guard for Boots and Shoes*.—Patent dated June 5, 1860.—The claim and engravings show the nature of this invention.

Claim.—Affixing to the heel part of a boot, shoe, or overshoe, a suitable guard, in the manner substantially as described and represented.

No. 28,576.—VINES HARWELL, of Walker County, Ga.—*Improvement in Cultivators*.—Patent dated June 5, 1860.—This invention relates to a new and improved arrangement and construction of the different parts of a cultivator, whereby it may be readily adapted either for one or two horses, and when for one, either with or without shafts.

Claim.—The peculiar arrangement and combination of the removable shafts C, centre beam A, and guide G, with a cultivator; the whole being constructed and operated in the manner and for the purposes set forth.

No. 28,577.—JAMES A. HAWLEY, of Jackson, Mich.—*Improved Composition for Roofing Houses*.—Patent dated June 5, 1860.—This invention consists in forming the roof of layers of lime mortar, that is, lime and sand and oil; the oil is either mixed in or afterwards absorbed into the mass, and two or more layers or strata of sand, lime, and oil are put on to form a roof.

Claim.—Making roofs of this composition without the use of tiles or slates or canvas, or any other roofing material or agents in connection therewith, substantially as set forth.

No. 28,578.—JAMES HOLLINGSWORTH, of Chicago, Ill.—*Improved Apparatus for Heating Air by Steam*.—Patent dated June 5, 1860.—The steam chest or heater is intended to be arranged a considerable distance above the body of the boiler, that ample room may be left for the circulation of air under the bottom, between it and the body of the boiler.

The inventor says: I claim the arrangement of the furnace J, boiler B, steam boxes and pipes C D, and air box A, as and for the purpose shown and described.

I also claim the arrangement of the deflectors H I J between the steam boxes and the boiler, as and for the purpose shown and described.

No. 28,579.—J. BURROWS HYDE, of Newark, N. J.—*Material for Facing Moulds for Casting Metals*.—Patent dated June 5, 1860.—This invention consists in the employment of finely powdered peaty matter, used separately or mixed with other material in proportions according to the article to be cast and the judgment of the moulder.

The inventor says: I claim the herein described peaty material for facing moulds for casting metals, and which I propose to designate as "Vulcan dust."

I also claim the use of said material when combined with other material for the purpose set forth.

No. 28,580.—ELIAS T. INGALLS, of Haverhill, Mass.—*Improved Machine for Skiving Leather*.—Patent dated June 5, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, in a machine for skiving counters of boots and shoes, the use of two skivers, one travelling on the arc of a circle, or nearly so, and the other in a straight line, or nearly so, operating substantially as described, whereby both the curved and straight portions of the counter are skived at one operation, as set forth.

In combination with the above, so arranging the knife stock that the knife, if desired, may bear with an elastic yielding pressure upon the former, so as to be adapted to skiving counters of irregular curves, as set forth.

No. 28,581.—HIRAM JAMES, of Barclay, Ill.—*Improved Apparatus for Measuring Liquids*.—Patent dated June 5, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, measuring chamber D and its internal vertical supply tube E, communicating at its bottom F with the chamber, in combination with the vertical, adjustable, regulating tube L, essentially as described, so that by raising or lowering the tube L the quantity of measured liquor may be increased or diminished, as desired.

Second. The stoppers J and G, in their respective coned tubes I and E, on the rod H, in combination with the lever U T, essentially as described, by means of the slot P, so that the lever may quickly open and close the stoppers at one operation to admit or discharge the measured liquor, without permitting a continuous stream to pass from the reservoir through the measuring chamber.

No. 28,582.—REUBEN JENKINS, of Covington, Ky.—*Improved Bedstead*.—Patent dated June 5, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, in combination with main bedstead A, the arrangement of the secondary bedstead B, the hollow side rails F of which are made to slide into and be accommodated within the tubular rails E of the main one, in the manner and for the purposes substantially as set forth.

Second. I claim the combination of the divided slats *a a a* and joints *b b*, with the sliding side rails F, the whole being arranged and operated in the manner as set forth, for the purpose specified.

Third. In combination with the bedstead, constructed as described, having hollow metal posts, I claim the bases H when made of cedar, sandal, or other fragrant wood, arranged in the manner substantially as set forth, for the purpose of rendering the bedstead vermin proof.

No. 28,583.—W. F. JOHNSON, of Wetumpka, Ala.—*Improvement in Cotton Cultivators*.—Patent dated June 5, 1860.—This invention consists in the use of a rotary wheel attached to a beam provided with hoes or cutters, and so arranged as to be placed under the complete control of the operator and rotated by the draught of the machine, the wheel being placed in such relation to the beam that the knives or hoes will pass obliquely over the rows of plants and cut or thin them out, as required.

Claim.—The arrangement of the beam A, wheel E, shaft F, with cutters or hoes *f* attached, and lever J, (with or without the wheel I,) substantially as and for the purpose set forth.

No. 28,584.—HERMANN KALLER, of Perry, Ill.—*Improvement in Grain Binders*.—Patent dated June 5, 1860.—This invention consists, first, in combining with a vibrating curved arm or arms two rotary shafts connected by gear wheels and furnished with suitable wipers and cams, in such a manner that by operating the curved arm the grain is held, and by rotating the shaft the wire is cut and twisted around the grain, leaving the gavel in complete order. Second, in the arrangement of a dog in combination with the clamp that serves to retain the end of the wire for the purpose of more effectually confining the wire in said clamp.

The inventor says: I *claim*, first, the arrangement of the two rotary shafts *f g*, with the gear wheels H I, wiper *i*, and cams *n*, in combination with the shears L and with vibrating curved arm E, constructed and operated as and for the purpose described.

Second. The arrangement of the dog *g*, in combination with the clamp J, constructed and operating substantially as and for the purpose specified.

Third. The combination, with the rotary spring catch K, of the two armed fork M, substantially in the manner and for the purpose described.

No. 28,585.—GIBBONS L. KELTY, of New York, N. Y.—*Improved Window Curtain*.—Patent dated June 5, 1860.—This invention consists in making the curtains of buckram, or similar cheap and stiff material, coated with flock.

Claim.—The lambarkin or fixed window curtain, of buckram or other material, covered in the manner specified.

No. 28,586.—BALTHASAR KITT, of Cincinnati, Ohio.—*Improvement in Ringing Bells.*—Patent dated June 5, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement of the clapper J, attached to the curved vibrating arm I, and pivotted to projection H, and the clapper J, operated by the cord M, passing between the rollers *a* and *b b*, and secured to an arm of the wheel E, as and for the purposes shown and described.

Second. I claim the arrangement described, in relation to the bell, of the two clappers F and J, by which the sounds shall follow each other at equally successive intervals, and with harmonious or concordant sounds.

No. 28,587.—STEPHEN KROM, of New York, N. Y.—*Improvement in Buttons.*—Patent dated June 5, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The employment of a flanged washer C, in combination with a flat headed screw B, and button A, substantially as described, so that the head of the screw, by being drawn into the recess formed on the underside of the washer, preserves the evenness of the inner surface of the cloth or other fabric to which the button is attached, affording, at the same time, a good hold on the cloth.

No. 28,588.—GEORGE LEACH, of New York, N. Y.—*Improvement in Pull Cocks.*—Patent dated June 5, 1860.—This invention consists in attaching the handle or pull of the plug of the cock, so as to be strong and durable, and at the same time allow the parts to be easily detached to grind in the plug of the cock.

Claim.—The arrangement of the follower 6, spring 5, and screw 7, in connection with the handle or pull *c*, and its screw 8, for the purpose and as set forth.

No. 28,589.—JOHN W. LOGAN, of Philadelphia, Pa.—*Improvement in Securing Reef Points of Sails.*—Patent dated June 5, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, securing single reef nettles by passing them through eyelets and fastening one side by increasing the diameter of the rope, and the other by securing the nettle by seizing to a jack line, substantially as described.

Second. Securing double reef nettles by placing the centre of the double reef nettle close to an eyelet and fastening it by seizing through the eyelet to a jack line on the opposite side of the sail, substantially as described.

No. 28,590.—JOHN MATTHEWS, JR., of New York, N. Y.—*Improvement in Galvanoplastic Coating for the Interior of Metallic Tubes.*—Patent dated June 5, 1860.—This invention relates to the employment as the bath or decomposition cell of the tube itself, and to the use for the purpose of conducting the galvanic cement, and for replenishing the supply of the coating metal, of a rod or wire passing through the tube in the direction of its length.

The inventor says: I *claim*, first, the extension or stretching of the tube by screw threads and nuts, or their equivalents, substantially as and for the purpose set forth.

Second. The use of non-conducting supports *b b*, applied substantially as and for the purpose specified.

Third. Providing for the longitudinal movement of the central conductor and its non-conducting supports *b b*, within the tube, substantially as and for the purpose set forth.

No. 28,591.—JAMES W. McLEAN and ALBERT GUMMER, of Indianapolis, Ind.—*Improvement in Shingle Machines.*—Patent dated June 5, 1860.—This invention consists in using a vibrator of different construction from that found in any other machine, and also in dispensing with the ordinary cam yoke, and substituting therefor cam jaws which are adjusted by means of a tightening screw and key.

Claim.—The combination of the vibrator with the shears *m m m*, the two pins *n n*, tumbler *o o*, spring *q*, in connection with the reciprocating guide V, substantially as and for the purpose set forth.

No. 28,592.—GEORGE MILLIRAN, of Byhalia, Miss.—*Improvement in Cotton Presses.*—Patent dated June 5, 1860.—A rope or chain H is secured in a suitable position, as at *h*, to the carriage or beam, inside of the upper near roller F, back around which it presses and extends thence forward to the windlass, on which it winds in the direction opposite to that of the rope or chain I, thereby drawing the carriage or beam back.

Claim.—The arrangement and combination of the carriage or beam E, toggle lever D, and follower C, provided with the friction roller or rollers *f*, substantially in the manner and for the purposes specified.

No. 28,593.—MATTHEW MITCHELL, of Altona, Ill.—*Improvement in Seeding Machines.*—Patent dated June 5, 1860.—This invention consists in the use of an oscillating rim or band,

which encompasses a stationary cylinder with two holes or openings, the oscillating rim or band being provided with a single opening which works underneath a cut-off, the above parts being used in connection with a scatterer and seed tube.

The inventor says: I *claim* the combination of the perforated oscillating rim or band B, stationary perforated cylinder C, and cut-off *e*, arranged substantially as described, and relatively with the seed-box A, and the tube D, to operate as and for the purpose set forth.

I also claim, in combination with the perforated oscillated rim or band B, perforated stationary cylinder C, and cut-off *e*, the tube D, scatterer F, and share E; all arranged for joint operation as set forth.

No. 28,594.—WILLIAM P. MOSES, of Exeter, N. H.—*Improved Currying Knife*.—Patent dated June 5, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The guard D, as applied to a currying knife, substantially in the manner and for the purpose specified.

No. 28,595.—DANIEL MOYER, of New Hamburg, Pa.—*Improvement in Corn Planters*.—Patent dated June 5, 1860.—In this invention the plough beams are strengthened by iron plates. The hoppers containing the seed corn are placed on the beams immediately behind the ploughs, and just before the shovel or mould board which covers the seeds in the hill. The tubes extend from the bottoms of the hoppers, and are four in number in each hopper.

Claim.—The arrangement of the centre beam A, wheel *a*, arms B B and C C, plates *v v* and *r*, the brace *g*, bars *c c*, hoppers F, ploughs M and N, mould boards or shovels *m*, tubes *n*, connecting rods *e*, slides *i*, and wheels H, as described, for the purposes specified.

No. 28,596.—ROBERT NICOLL, of New York, N. Y.—*Improvement in Stop Cocks*.—Patent dated June 5, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The employment or use of two valves D E, placed at opposite sides of the seat *c*, and made to move simultaneously towards and from the seat by means of the right and left screws, or their equivalents, for the purpose specified.

No. 28,597.—PETER H. NILES, of Boston, Mass.—*Improved Telescopic Drinking Cup*.—Patent dated June 5, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Making the cup or bottom part A, and one or more of its annular sections B C, with bottom flanches *b b*, and applying the cover so as to fit the bottom part A, and project over the same and the upper edges of its annular section or sections, as described.

No. 28,598.—FREDERICK S. OTIS, of Brooklyn, N. Y.—*Improvement in Devices for Manufacturing Skeleton Skirts*.—Patent dated June 5, 1860.—This invention consists in the combination of a reel containing covered wire or spring for forming the hoops with a former upon which the skirt is put together in the proper shape, whereby the operator draws off from said reel the length of wire required for each, as she successively measures the same, cuts it off, inserts it through the bands, puts on the clasps, and then proceeds to the next hoop.

Claim.—The combined reel and former, constructed substantially as and for the purposes specified.

No. 28,599.—GEORGE PALMER, of Littlestown, Pa.—*Improvement in Pumps*.—Patent dated June 5, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The employment, for united operation, of the spherical chamber E, diaphragm *d*, gum elastic springs G G, jointed connecting rod F, and weighted lever H, when the same are constructed and arranged to operate in combination with an arrangement such as described, for raising and forcing water, as set forth.

No. 28,600.—C. G. PLYMPTON and H. M. PLYMPTON, of Walpole, Mass.—*Improvement in Tempering Steel Springs*.—Patent dated June 5, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The application of water to steel articles while the latter are properly heated and subjected to pressure, or held by dies, presses, or other device in the particular form or shape desired, for the purpose of tempering the same, substantially as described.

No. 28,601.—WHITMAN PRICE, of Wayne County, N. C.—*Improvement in Ploughs*.—Patent dated June 5, 1860.—This invention consists in the construction of the mould board and bar, and attaching the same to a circular beam.

Claim.—The arrangement of A the circular beam, B the standards, C the shovels, D the main beam, *e* the handles, *a* the screw on the upper end of the standards, and *b* the screw nut, combined and operating as described and for the purposes set forth.

No. 28,602.—WHITMAN PRICE, of Mount Olive, N. C.—*Improvement in Machines for Planting Cotton Seed*.—Patent dated June 5, 1860.—This machine is put in motion by the main driving wheel E, the opener B opening the earth for the reception of the seed, and as the wheel E revolves the shaft F it gives motion to the wheel D, with arms revolving in hopper O, which agitates and separates the seeds, allowing them to drop through the slide e. The wheel L follows immediately after, and presses the seed into the ground, and the mould boards a a cover the seed, and the leveller C follows, levelling it over and making the ground smooth.

Claim.—The arrangement of frame A, mould boards a a, leveller C, wheels E and L, wheel D, with arms in hopper O, arms H H, flexible joint K, and standard M; the whole operating as described and for the purposes set forth.

No. 28,603.—EBEN PRITCHARD, of Waterbury, Conn.—*Improvement in Calendar Clocks*.—Patent dated June 5, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination of the notched annually revolving cam E, and the movable extension piece H, applied substantially as described, in combination with the quadrennially revolving wheel I, to control the action of a spring upon a dog G, or its equivalent, for the purpose of completing the revolution of the month wheel and day-of-the-month index at the end of the months of less than thirty-one days throughout every quadrennial period.

Second. The combination of the pin 9 on the annually revolving cam, or its equivalent, and the lever like spring 7, applied to operate on the stop pawl i of the month wheel, substantially as and for the purpose specified.

No. 28,604.—A. H. RAUCH, of Bethlehem, Penn.—*Improved Devices for Drawing Water from and Supplying Air to the Air Vessels of Pumps, &c.*—Patent dated June 5, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The drainer C, applied in combination with the air vessel A, and furnished with a system of cocks, substantially as described, whereby the water in the air vessel may be exchanged for air, as set forth.

No. 28,605.—C. F. RICHTER, of Columbia, S. C.—*Improvement in Ploughs*.—Patent dated June 5, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The construction and arrangement of the two pieces E G, the mould board or share H, and their several connections, for the purpose of uniting them together and allowing the mould board to be adjusted to the pieces E G, substantially as set forth and explained.

No. 28,606.—GEORGE W. RICHTER, of Philadelphia, Pa.—*Improved Porter Bottle Boxes*.—Patent dated June 5, 1860.—This invention consists in constructing a box for the conveyance of bottles of porter, &c., by combining the bottom, sides, and ends of the box with metallic frames by means of bolts, which hold the several parts together in a strong and substantial manner without the use of nails or screws.

Claim.—Combining and arranging the sides A A, ends B B, bottom C, and partition strips G, with the metallic frames D D, and rods E E E E, substantially in the manner and for the purpose set forth.

No. 28,607.—NATHAN D. ROSS, of Braintrem, Pa.—*Improved Churn*.—Patent dated June 5, 1860.—This invention consists in lengthening or shortening the stroke, and lowering and raising the dash so as to give to it the right position in the churn, at the same time giving to the dash an independent revolving motion to the right and left, and giving to the operator power over the work to be done.

Claim.—The revolving of the churn dashers O and handle L, by means of the peculiarly constructed series of dashers O and blades N, the whole being constructed and working as described above.

No. 28,608.—O. P. ROWLAND, of Jamesport, N. Y.—*Improved Elastic Lining for Boom Jaws*.—Patent dated June 5, 1860.—This invention is intended to prevent the wear of the parts covered.

Claim.—The application of an India rubber roll R as a lining for boom, gaff, and yard jaws, constructed, arranged, and operating substantially as and for the purposes set forth.

No. 28,609.—J. S. SAMMONS, of New York, N. Y.—*Improvement in Car Couplings*.—Patent dated June 5, 1860.—In this invention there is used a vertically moving catch, a pendant dog, a lever, springs and top combined and arranged in relation to each other and the bumper head.

Claim.—The bar catch E, dog D, and disengaging lever F, combined with a stop or ledge

G, and retaining spring H, with or without the spring I; all being placed within the bumper head, and arranged, relatively with each other, to operate as set forth.

No. 28,610.—CHARLES SCOFIELD, of Adams, N. Y., and CLARKE RICE, of Watertown, N. Y.—*Improvement in Sewing Machines*.—Patent dated June 5, 1860.—By taking away the spring *m*, or moving it out of its operative position, the operation of the hook *l* may be caused to cease, and the machine will make the ordinary shuttle stitch.

The inventors say: We *claim* the combination, in the manner shown and described, of feeding dog P, with the slide L and cams M M¹, for the purpose set forth.

We also claim the combination of the sliding wedge Q with the spring feeding dog P, slide L, and cams M M¹, as and for the purpose shown and described.

We also claim the combination of the pivotted lever hook *l* with the guide plate F and plate H¹, spring *m*, and cam *p*, as and for the purpose shown and described.

No. 28,611.—GEORGE SCOTT, of Cincinnati, Ohio.—*Improvement in Moulds for Jars*.—Patent dated June 5, 1860.—This invention consists in making moulds for moulding jars in two parts, each part of which is adapted to be rotated on the potter's wheel or lathe separately, while its part of the jar is formed upon its inner surface.

Claim.—The two part mould for moulding jars, when the parts 1 and 2 thereof are made and adapted to be used with a potter's lathe, in the manner substantially as described.

No. 28,612.—E. A. SMEAD, of Tioga, Pa.—*Improvement in Corn Shellers*.—Patent dated June 5, 1860.—Surrounding the drum is a fluted concave E, having the form of a scroll described from the axis of the drum A, and gradually diminishing from the feeding point G to the place of discharge H, which is a vertical opening. The edge of the concave at G is turned up close to the periphery of the shelling drum so that the ears of corn may not escape at this point, and the bottom edge *c* of the concave is turned under so as to come sufficiently close to the base of the conical drum to prevent the ears from escaping through the bottom of the machine during the operation of shelling.

Claim.—The employment of an upright scroll shaped shell E, and drum A, arranged and operating in respect to each other as shown and described, for the purpose set forth.

No. 28,613.—CHARLES F. SPENCER, of Rochester, N. Y.—*Improvement in Anti-Friction Screws and Nuts*.—Patent dated June 5, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The employment of anti-friction balls C C, arranged in adjustable sockets in the interior of a threadless nut B, in combination with a screw A, which has screw threads formed to fit said balls, substantially as and for the purposes specified.

No. 28,614.—JOHN K. STAMAN, of Mifflin, Ohio.—*Improved Boot and Shoe Wiper*.—Patent dated June 5, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Forming a feet wiper or cleaner, substantially as described, that is to say, by binding corn shucks or other suitable material upon a suitably shaped stock, as and for the purpose set forth.

No. 28,615.—PTOLLMAN STOVER, of West Alexandria, Ohio.—*Improvement in Corn Planters*.—Patent dated July 5, 1860.—When this machine is drawn along the ground, the shovels *a* make a furrow in which the seeds drop, and the roller B gives motion to the toothed wheel E connected to its side to the toothed wheel G, and this, by means of the crank I on its shaft, moves the seed slides and so delivers the seed into the ground, where it is covered by the shares *b*, and the soil pressed down by the traction rollers B.

Claim.—The peculiar arrangement of the measuring space, having an elastic back piece *k*, and an adjustable front piece *j*, in connection with the cut-off *g*, and lower slide *f*; all constructed, arranged, and operating in the manner substantially as and for the purposes set forth and described.

No. 28,616.—JAMES STRATTON, of Brooklyn, N. Y.—*Improvement in Devices for Regulating the Pressure of Water in Pipes*.—Patent dated June 5, 1860.—This invention consists of an air chamber formed with a plunger, or yielding bottom, to which a valve stem is attached, the air chamber and valve being arranged in connection with suitable pipes and in such relation to the supply pipe as to effect the desired end.

Claim.—The employment or use of the pipe A¹, communicating with the diaphragm chamber, with or without the air chamber, in connection with the supply pipe A, valve C, and pipes D F G, with necessary cock or cocks, arranged to operate substantially as and for the purpose set forth.

I further claim, in connection with the above named parts, the perforated cap or chamber J, encompassing the valve C, substantially as and for the purpose set forth.

No. 28,617.—JAMES TAYLOR, of South Dartmouth, Mass.—*Improvement in Liquids for Fluid Gas Meters*.—Patent dated June 6, 1860.—The claim explains the nature of this invention.

Claim.—The use of the bittern or mother-water left after extracting the crystallizable salts from sea water for filling wet gas meters; all in the manner and for the purpose substantially as set forth.

No. 28,618.—BENAIAH TITCOMB, of Baltimore County, Md.—*Improvement in Harvesting Machines*.—Patent dated June 5, 1860.—This invention consists in the arrangement of a hinged lever provided with a spherical friction roller, or its equivalent, for communicating motion to the cutters from the cam groove of the driving wheel, so that by the use of a rod or lever the friction roller can be instantly thrown from the cam groove while the machine is in motion.

Claim.—The hinged lever E, provided with the spherical roller D, or its equivalent, constructed, arranged, and operated substantially as and for the purposes set forth.

No. 28,619.—RICHARD VOSE, of New York, N. Y.—*Improvement in Car Springs*.—Patent dated June 5, 1860.—This car spring is composed of centrally perforated flat sided disks *d d d* of vulcanized India rubber, or gutta percha, combined with each other by means of the caps *a b*, the rings *c c*, and the central bearings *e e*.

Claim.—The disks *d d d*, the caps *a b*, the rings *c c*, and the central bearings *e e*, when constructed and arranged substantially in the manner set forth.

No. 28,620.—L. WADDELL and W. H. WADDELL, of Staunton, Va.—*Improvement in Car Couplings*.—Patent dated June 5, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim* the combination of the lever and latch, in the manner described, with especial reference to the security of the coupling and the easy detachment of cars when in motion, and even going up grade.

We do not claim the swinging plate for the purpose of admitting the link, that being somewhat the principle both of the swinging pin and tumbler catch, which are common; nor do we claim it for the purpose of preventing the escape of the link, but only so far as it may be a novelty as a device for holding the link in such a position as to insure certainty in coupling.

No. 28,621.—THOMAS WALL, of Jones Station, Ohio.—*Improved Bedstead*.—Patent dated June 5, 1860.—This invention relates to the manner of connecting the side rails of a bedstead to the corner posts thereof and retaining them in place, also to an improved device for tightening the bed cord when the same is applied to the bedstead.

Claim.—The flanged sockets and hooked fasteners or clasps, as described, when used in combination with the windlass rail E, with its pin *f*, ratchet *e*, and latch *h*, all arranged to operate as and for the purposes set forth.

No. 28,622.—ALONZO WARREN and E. DAMON, JR., of Boston, Mass.—*Improvement in Hanging Turbine Wheels*.—Patent dated June 5, 1860.—This invention consists in a novel combination of a hollow spindle shaft with globular enlargement, adjustable step, and stationary shaft, whereby a very short hollow shaft may be used, adding on the top the necessary length of solid shaft.

Claim.—The globe coupling A, in combination with the adjustable screw step B, the same being used for a vertical turbine shaft, in the manner set forth.

No. 28,623.—CHARLES L. WILLIAMS, of Quincy, Fla.—*Improved Detachable Hook for Suspending Boats*.—Patent dated June 5, 1860.—This invention consists in the use of rods with conical enlargements on their ends that hang from the lower pulley blocks of the davits, and in applying fixedly, to the stem of the boat to be hung from the davits peculiar shaped brackets, provided with levers that in conjunction with shoulders formed on the brackets receive and hold the conical ends of the rods, attached to the tackle, by virtue of the gravity of the boat acting upon the lever.

Claim.—The combination of lever C, rod G, with shoulder *a*, on the bar A, and the treadle J, all arranged as and for the purposes specified.

No. 28,624.—THOMAS H. WITHERBY, of Worcester, Mass.—*Improvement in Rotary Engines*.—Patent dated June 5, 1860.—The single abutment F provides only for running the engine in the direction indicated by the arrow, and a similar abutment S is applied to the opposite mouth of the cylinder, to provide for its running in the opposite direction.

Claim.—The abutment S, applied in connection with the abutment F, and in combination with a reversing valve, to operate substantially as and for the purpose set forth.

No. 28,625.—JOSEPH WOODRUFF, of Rahway, N. J.—*Improvement in Harvesters*.—Patent dated June 5, 1860.—At, or near, each end of the knife K is attached a cord or belt *h*, which passes over and under the pulleys *i* and *k*; L and L¹ are the operating levers pivotted to the wheel frame; one of these levers L is attached to the pulley cord *h* by a small cord *l*; the other lever L¹ is attached to the knife by a small cord *m*.

Claim.—The arrangement of the levers L L¹, pulleys *i* and *k*, and cords *h l* and *m*, for operating the reciprocating curved knife, as and for the purposes set forth and described.

No. 28,626.—LUM WOODRUFF, of Ann Arbor, Mich.—*Improvement in Barometers*.—Patent dated June 5, 1860.—F is the screw plug for closing the orifice of communication *d* between the cistern and the reservoir, said plug screwing through a tapped hole *e* in the back of the reservoir opposite to the orifice *d*, which is tapped with a taper tap so that the plug may screw into it very tightly.

Claim.—The screw plug, constructed and applied to the reservoir and cistern, substantially as described and operating as set forth.

No. 28,627.—WILLIAM B. BERNENT, of Philadelphia, Pa., assignor to himself and JAMES DOUGHERTY.—*Improved Machine for Cutting Key Seats, &c.*—Patent dated June 5, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the described combination of the reversible screwed shaft C, with the revolving drill or drills, when an intermittent motion at right angles to the said screwed shaft is imparted to the said drill or drills by the devices described, or their equivalents, and when the screw is caused to impart an uniform reciprocating motion to the drills or to the object operated on by the drills.

Second. The hollow spindle I, its clutches K and K¹, bevel pinions G and H, and internal rod J, the whole being constructed and arranged for joint action and combined with the bevel wheel F, on the screwed rod C, as set forth, so that the said screwed shaft may be reversed by the movement of the internal rod J, as set forth.

Third. Operating the reversing clutches from the carriage which carries the drills or which carries the object acted on by the drills, through the intervention of the T-shaped lever Z, or its equivalent, with its pointed arm 27, and the spring rod 26, with its pointed end, the whole being combined and arranged for joint action, substantially as and for the purpose set forth.

Fourth. I claim, in combination with the above mentioned reversible lever Z, and its adjuncts, the adjustable screw collars 17 and 18, connected to the carriage D, and arranged in respect to the rod 15, and its adjustable collars 21 and 22, substantially as set forth.

Fifth. I claim the described stop motion by which the advance of one of the drills is retarded during the movement of the machine; that is to say, I claim furnishing one of the head stocks which carries one of the drills, with a movable nut *l*, so arranged as to be thrown out of gear with the screwed shaft U, by the head stock which carries the opposite drill, through the intervention of the devices described, or their equivalents.

No. 28,628.—CHESTER BULLOCK, of Jamestown, New York, assignor to himself and DE FOREST WELD, of said Jamestown.—*Improved Mowing Machines*.—Patent dated June 5, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement of means recited for connecting the frame or bars of the fingers and cutters to the frame or body of the mower or machine.

Second. The arrangement of means set forth for allowing of the suspension and for suspending the frame of the cutters and fingers by the side of the mower.

Third. The means recited for uniting the cutter bar to the connecting rod.

Fourth. The arrangement of means described for connecting the draft pole to the mower or machine frame, and for the purposes set forth.

Fifth. The manner of attaching the cutters to the fingers and cutter bar described.

No. 28,629.—ISAAC COOK, of Mount Pleasant, Iowa, assignor to himself and HUGH McCLURE, of said Mount Pleasant.—*Improved Washboard*.—Patent dated June 5, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination, with an ordinary washboard, of the reciprocating and hinged rubbers and frames working in suitable grooves, and made yielding to the varying thickness of articles placed between the rubbers and board, as and for the purposes set forth.

Second. The arrangement, in combination with the above reciprocating rubbers and frame, of a suitable pump, arranged so as to supply water to the top of the board over the articles between the rubbers, as set forth.

No. 28,630.—PERLEY D. CUMMINGS, of Portland, Me., assignor to D. H. FURBISH, of said Portland.—*Improvement in Chains*.—Patent dated June 5, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* a chain link strap, one of whose ends has a head formed on it while the other end has a socket to receive the head, substantially as described.

I also claim an open coupling link for chains, with ears located at the outer sides of the legs of the link, as described.

No. 28,631.—PERLEY D. CUMMINGS, of Portland, Me., assignor to D. H. FURBISH, of said Portland.—*Improvement in Gearing*.—Patent dated June 5, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* a universal reversible bolt standard, constructed substantially as set forth, for the purpose of securing a driving wheel to a carriage wheel.

I also claim the combination of the universal reversible bolt standard described with the driving wheel by means of a flange upon the latter, substantially as described.

No. 28,632.—DAVID FELLENBAUM, of Lancaster, Pa., assignor to himself and NATHANIEL BAKER, of Marietta, Pa.—*Improved Variable Cut-Off for Steam Engines*.—Patent dated June 5, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the stationary lifting pieces $f f^1$, applied and operating in combination with the stems of the puppet valves, substantially as described.

Second. The combination of the two tripping levers $u v$ and $u^1 v^1$, attached to the slide valve B, and the tripping piece D, made adjustable within the steam chest; the whole applied and operating in combination with the slide and puppet valves, substantially as and for the purpose specified.

Third. The combination of the lifting pieces $f f^1$, the two tripping levers $u v$ and $u^1 v^1$, and the tripping piece D; the whole applied and operating in connection with the slide and the puppet valves, substantially as described, to constitute a variable cut-off.

No. 28,633.—HENRY W. FULLER, of Brooklyn, N. Y., assignor to himself and ANTHONY W. GOODELL, of said Brooklyn.—*Improvement in Mechanism for Marking Cloth in Sewing Machines*.—Patent dated June 5, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* forming one, two, or more creases in cloth, by means of markers, on opposite sides of the cloth, one of which is connected with the bed of the machine, and the other operates simultaneously with vibrations of the needle in a sewing machine, whereby the crease or creases are formed in the cloth itself parallel to the line of sewing, in such a manner that the cloth is ready for doubling over at said creases for the next line of sewing, as set forth.

I also claim marking a line on the surface of cloth, or other material, being sewed in a machine by means of a pencil, or similar article, that is pressed upon the surface of said cloth at the time the needle perforates the same, and is raised therefrom when the feed takes place so as to produce a series of marks parallel to, and simultaneous with, the line of sewing, as set forth.

No. 28,634.—CHARLES J. HAYWOOD, of Durham, Conn., assignor to the MERRIAM MANUFACTURING COMPANY, of said Durham.—*Improvement in Making Tin Boxes*.—Patent dated June 5, 1860.—This invention consists in a process or method of producing a certain result in the manufacture of tin boxes, &c.

The inventor says: I *claim*, first, a properly constructed and arranged friction device, substantially such as described, for securing a head or bottom of a tin box, &c., as the recess die A, ridges E, friction sliding plate C.

Second. I claim a new manufacture of an old article or tin box, for various purposes, by a new process, substantially in the manner described.

No. 28,635.—XAVIER KARCHESKI, of New York, N. Y., assignor to LOUIS T. VALENTINE, of said New York.—*Improvement in the Manufacture of Vegetable Parchment*.—Patent dated June 5, 1860.—(Suspended.)

No. 28,636.—WILLIAM MAY, of Winchester, Ohio, assignor to J. DE BRUIN, E. A. RAMSEY, and W. W. RAMSEY, of said Winchester.—*Improvement in Self-Acting Wagon Brakes*.—Patent dated June 5, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the chain I, operating in connection with the slotted tongue piece D, when operating reversely upon the same lever with bar C, for the purpose described.

Second. I claim the construction of the bar F, and the plate G, adapted to stops $k l$, arranged and operating substantially as set forth, being for the sole purpose of reversing the action of self-acting wagon brakes, in combination as described.

No. 28,637.—WILLIAM H. NOYES, of Boston, Mass., assignor to HARVEY T. LITCHFIELD, of said Boston.—*Improved Gauge for Filling Barrels*.—Patent dated June 5, 1860.—In this invention the indicator will rise with the float, and reaching the level of the upper surface of the bung hole, will show that the barrel has been sufficiently supplied with the liquid.

Claim.—Combining with the filling tube A, the groove or chamber B, and its float C, furnished with an adjustable slide or indicator, as described.

No. 28,638.—JOHN C. REED, of Cincinnati, Ohio, assignor to himself and S. E. HUTCHINSON, of said Cincinnati.—*Improvement in Picks*.—Patent dated June 5, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The employment of the rebate F, in the jaw D, when used in connection with a spring jaw E, and slide H, to hold the bit; the spring being constructed so as to retain the slide, substantially as set forth.

No. 28,639.—JOHN F. SCHUYLER, of Philadelphia, Pa., assignor to WILLIAM E. LOCKWOOD, of said Philadelphia.—*Improvement in Apparatus for Dressing Grindstones*.—Patent dated June 5, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The described dressing wheel, composed of a series of radiating sharp-pointed chisels, situated between two yielding washers, the whole being arranged and hung to the stem C, or its equivalent, substantially in the manner and for the purpose set forth.

No. 28,640.—JOHN TIEBOUT, of Brooklyn, N. Y., assignor to himself and WILLIAM TIEBOUT, of said Brooklyn, N. Y.—*Improved Bung Cutter*.—Patent dated June 5, 1860.—Secured to the lower end of the shaft C is a disk F by means of a screw or screws *a*. This disk is furnished with a series of radial slots *b*, the number of which corresponds to the number of cutters to be employed, and which form the guides for the adjustable hinges *c*, to which the cutters G are attached by means of pivots *d*.

The inventor says: I *claim*, first, the combination with the disk F and arms *f* of the adjustable hinges *c*, as used for the purpose shown and described.

Second. The combination of the tubular projection D, and adjustable guide plates *h*, with the sliding shaft C and disk F, as and for the purpose shown and described.

No. 28,641.—JOSHUA TURNER, of Cambridgeport, Mass., assignor to himself, F. GUILD, E. C. DANIELL, and WARREN COVELL, of Dedham, Mass.—*Improved Machine for Buffing and Reducing Leather*.—Patent dated June 5, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the combination of the rotary grinder B, the bed roller E, the draft roller D, and the brush F, arranged and made to operate together substantially as described, and for the purpose as specified.

I also claim the application of the feed and bed rollers to a rocker frame C, or its equivalent, and combining therewith devices substantially as described, whereby the two rollers may not only be simultaneously moved away from and toward the buffing cylinder B, but the feed roller be moved from and toward the bed roller; such devices being the springs *c c*, the rotary windlass H, and its connections *b¹ b¹ e e*, and the band and treadle I, or other equivalent means.

I also claim supporting one of the rocker frame bearings in a slider, and providing such with adjusting screws, the same being for the purpose as specified.

No. 28,642.—THOMAS J. ALEXANDER, of Westerville, Ohio.—*Improvement in Mechanism for Starting Sewing Machines*.—Patent dated June 12, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, so constructing and hanging or arranging the lever, or its equivalent, which serves for the knee or knees of the operator, to set in motion mechanism for starting the treadle-driven shaft in a forward or given direction, as that said lever requires the lateral action of the knee or knees to actuate it, essentially as set forth.

Second. The employment, in combination with a treadle, and for starting the treadle-driven shaft, in a forward or given direction, of a friction pad or wheel set in motion against a band or other wheel connected with said shaft, and actuating the same substantially in the manner described.

Third. So hanging and operating the friction pad or wheel which is employed to start the treadle-driven shaft in a forward or given direction, as that the same movement on the part of the operator, which serves to rotate or communicate driving motion to the friction pad or wheel, firstly brings said friction pad in close rubbing contact with the wheel it operates, and whereby the friction pad or wheel is made self-freeing, after having started the wheel or shaft, it is employed to direct the movement of, and give starting impetus to, substantially as specified.

No. 28,643.—WILLIAM H. AKINS and DARIUS BABCOCK, of Dryden, N. Y.—*Improvement in Machines for Cleaning Grain, when Fed to the Mill, and Cooling the Mill Stones.*—Patent dated June 12, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We claim, first, the tube Q, arms c, and inclines a, in combination with the hopper X and the upper surface of the revolving cone N, and the pin P, when used for feeding grain from a hopper, as described.

Second. We claim the cone N and tube R in combination with the fan L, when the fan L surrounds the cone N and tube R, the cone distributing the grain radially from its upper surfaces, its curved sides guiding the blast of air so as to most effectually dislodge all impurities.

Third. We claim the air passage between the upper surface of the stone B and the curb U, formed by closing the opening x x and inserting the holes V V for the admission of air at the outer edge and upper surface of stone B, for the combined purpose of cooling the stone in its passage over it, from its periphery to its centre or eye, and supplying the fan with air to clean the grain.

Fourth. We claim the manner of reversing the wings of the fan L by hanging them upon the pin O, so that they may be swung around to the position shown by the red lines No. 2, and latched over the pins P³.

Fifth. We claim running the fan L directly from the bail E, (or from the driver D, which would be equivalent thereto,) at the same speed of the stone, thereby avoiding the use of gear, band, or belt.

No. 28,644.—NEHEMIAH S. BEAN, of Manchester, N. H.—*Improvement in Pumps.*—Patent dated June 12, 1860.—This invention is limited to the novelty of arrangement and combination of old parts, working together, so as to produce a double acting suction and force pump.

Claim.—The concentric arrangement and combination of the pump cylinder, suction, and discharge passage, caps, and valve plates, with valves located in opposite sides thereof, all operating substantially as described.

No. 28,645.—G. H. BEARD, of Cincinnati, Ohio.—*Improved Claw Bar.*—Patent dated June 12, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The instrument for drawing spikes and similar purposes, constructed as described, comprising the three following and several features, viz: the U-shaped space E receding towards the heel to allow the necessary traverse to the spike in the process of drawing the heel C, and the recess formed by the inclined surfaces a a to receive the head of the spike, all substantially as described.

No. 28,646.—NELSON W. BREWER, of Williamsport, Pa.—*Improvement in Self-Loading Fire Arms.*—Patent dated June 12, 1860.—This invention consists in the construction and arrangement of the cylinder A, the spiral plate S, cap L, and cap box T, together with the manner of capping.

The inventor says: I claim, first, the arrangement of the cylinder A with the spiral plate S and cap L.

Second. The cup box T and manner of capping, described.

No. 28,647.—JOHN BUTLER, of Brooklyn, N. Y.—*Improvement in Flexible Gas Tubes.*—Patent dated June 12, 1860.—The claim and engravings explain the nature of this invention.

Claim.—As an improved article of manufacture, a flexible gas conductor, composed of a flexible leaden tube covered with braid or other suitable pliable non-metallic covering, substantially as shown and described.

No. 28,648.—HUGH CAMPBELL, of Newtown, Conn.—*Improved Steam Stuffing Box for Revolving Rolls.*—Patent dated June 12, 1860.—This invention consists in constructing a steam stuffing box, the external diameter of the friction surface of which is much less than that of any heretofore used.

Claim.—The arrangement of pipe n within pipe d, as described, in combination with the stuffing box b, and its appendages, and roll a, for the purposes and operating substantially in the manner fully set forth.

No. 28,649.—JOHN D. CHISM, of Albany, N. Y.—*Improvement in Shingle Machines.*—Patent dated June 12, 1860.—This invention consists in providing a device by which oscillating head blocks of shingle machines may be adjusted and regulated with accuracy.

Claim.—The cross bar I, as attached to the rack feed bar J, in connection with the recess or chamber N in the oscillating feed head G, all in the manner and for the purpose specified; and these parts or means I only claim when they are connected with the adjustable lever feed bar T, with the lateral adjustable screw W, and feed pawl attached to handle U, regulated by the spiral spring, as represented, all for the purpose and in the manner specified.

No. 28,650.—FRANCIS CIST, WILLIAM KOSSAK, and WILLIAM H. GODFREY, of St. Louis, Mo.—*Improved Tool for Laying and Stretching Carpets*.—Patent dated June 12, 1860.—This invention consists in combining the upper jaw of a pair of pliers or pincers with an upright foot F, on the sole of which a device D is arranged, designed to hold a tack T in such a position that it may be sunk by pressure into the desired place, using the point P as a fulcrum resting on the floor after the carpet *ec* has been pulled up to that place by means of the pliers.

Claim.—The combined arrangement of the wedge W, the recess R behind the wedge, and the slit S in the wedge, with each other and with the pliers or pincers, all constructed and operating substantially in the manner and for the purpose described.

No. 28,651.—JAMES CLARK, of Newark, N. J.—*Improvement in the Manufacture of Prussian Blue*.—Patent dated June 12, 1860.—This improvement consists in furnishing by artificial means the oxygen which is essential to the color of the precipitate, in place of the usual method of agitation to assist absorption of the oxygen from the atmosphere.

Claim.—Supplying atmospheric oxygen by artificial means in manufacturing Prussian blue, in the manner and for the purposes specified.

No. 28,652.—JOSEPH CLARKE, of Syracuse, N. Y.—*Improvement in Vapor Lamps*.—Patent dated June 12, 1860.—This invention consists in constructing hydro-carbon vapor generators in such a manner that the tube which conveys the fluid upward to the generator, and also the tube which conveys the vapor downward are both contained in one piece of metal.

Claim.—The construction of the conducting tubes H and G in one solid piece of metal E, substantially in the manner and for the purpose stated.

No. 28,653.—WILLIAM A. CLARK, of Bethany, Conn.—*Improved Tenoning Auger*.—Patent dated June 12, 1860.—The claim and engravings explain the nature of this invention.

Claim.—An adjustable hollow auger having the longitudinal lines of the periphery of the inner surfaces of the barrel at all times parallel to each other, within the entire limit of the adjustability of the instrument, constructed substantially as described.

No. 28,654.—M. C. COGSWELL and JOHN MCKIERNAN, of Buffalo, N. Y.—*Improvement in Bolting Chests*.—Patent dated June 12, 1860.—The claim and engravings explain the nature of this improvement.

The inventors say: We *claim*, first, the hollow shaft A, for the purposes and substantially as described.

Second. We claim the perforated cylinder D in combination with the hollow shaft A, for the purposes and substantially as set forth.

Third. We claim the combination and arrangement of the rotating reel head S, with the stationary head board Q and stationary cylinder R, for the purposes and substantially as set forth.

Fourth. We claim the relative arrangement of the cant boards G, cylinder H, brush I, bridge K, and openings T T, for the purposes as set forth.

No. 28,655.—LEONARD COLEMAN, of New Orleans, La.—*Improvement in Mills*.—Patent dated June 12, 1860.—This improvement consists in making the metal frame, or husk and hoop of the mill, all in one piece, by casting it all together; also, in supporting the hopper by a feed pipe, with a screw on the outside working in a female screw in the top of the case, so as to adjust the pipe and graduate the feed.

The inventor says: I *claim* the metal frame A and hoop B of the mill in one piece, constructed as described.

And in combination with the parts above claimed, I claim the feed pipe R, supporting the hopper, and adjusted by a screw, substantially as described.

No. 28,656.—THOMAS M. COLEMAN, of Philadelphia, Pa.—*Improvement in Horse Shoes*.—Patent dated June 12, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The horse shoe composed of the two plates A and B, permanently secured together with an intervening strip *c* of gum elastic or other equivalent material, when the latter as well as the plate B has recesses or slots *b*, arranged in respect to the nail holes of the plate A, in the manner set forth, so that the entire shoe can be secured rigidly to the hoof by simply driving the nails, and without separating the plates.

No. 28,657.—JAMES S. COLVIN, of Pittsburgh, Pa.—*Improved Steam Boiler*.—Patent dated June 12, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination and arrangement before described of the small air tight furnace, supplied with a blast of air, with a heating cylinder inside of a steam boiler, in the manner substantially as before described, for the purpose of securing the more uniform distribution of the heat of the furnace than is practicable when the bottom of the

boiler is exposed to the direct action of the fire, so that the greatest degree of heat shall be applied near to the surface of the water in the boiler.

Second. Placing the escape flue for the air and products of combustion of the furnace in the position in relation to the furnace and boiler substantially as described, so that the air and products of combustion gradually descend as they part with their heat until they find their exit at the lowest point, thus preventing the escape of the products of combustion until they have parted with as much as practicable of their excess of caloric, and thus, by economizing heat, effecting a great saving of fuel.

Third. Connecting the surface of the boiler with a heating chamber inside the boiler, by means of the confined throat of the fire chamber, substantially as described, so that the furnace being air tight and supplied with a blast, forces the heated air to rise directly to the top of the heating chamber, and thus apply the greatest heat near to the surface of the water, for the purpose of securing the more rapid generation of steam

No. 28,658.—HORACE I. CRANDALL, of New Bedford, Mass.—*Improvement in Marine Dry Docks*.—Patent dated June 12, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Combining with a cradle or carriage D the supporting and guiding columns C C C, when the same are in any suitable manner jointed or hinged to the cradle, so as to allow of its being raised or depressed, at the same time keeping the carriage horizontal, and serving as supporting columns when the carriage is at its highest point, essentially in the manner and upon the principles set forth.

No. 28,659.—J. W. CRANE, JR., of Freeport, Ill.—*Improved Washing Machine*.—Patent dated June 12, 1860.—The frames C D are formed of side pieces *b b*, in which the journals of the rollers are fitted. The forward frame C is of slightly concave form, and extends underneath the cylinder B and is suspended at its front end by the rods *c c* from the springs E E, which are attached at each side of the box A.

Claim.—The arrangement of the hinged concave frame C, in combination with the frame D, the vertically acting spring E, adjusting connecting rod *c*, pendant H, rod G, and the horizontally acting spring I, all as and for the purpose shown and described.

No. 28,660.—WILLIAM W. CULPEPPER, of Augusta, Ga.—*Improvement in Car Couplings*. Patent dated June 12, 1860.—This invention consists in providing a self-coupling bumper for railroad cars, intended to act with certainty and prevent accidents.

Claim.—The peculiar form of the throat H, combined with the sliding plate C, spring O, stop bolt *a*, bumper rods *r*, and keys *t*, arranged and operating with bumper A and link S, as and for the purpose set forth.

No. 28,661.—ISAAC EDGE, of Jersey City, N. J.—*Improved Torch for Night Processions*.—Patent dated June 12, 1860.—This invention consists in the employment of a head piece *a* of wood or other material, to the upper part of which is attached one end of a closely fitting case *b* of paper or other proper material, made cylindrical and of a length proportionate to the requisite duration of the light.

Claim.—A procession torch made or arranged in the manner set forth.

No. 28,662.—PHILIP ESTES, of Leavenworth, Kansas Territory.—*Improvement in Quartz Crushers*.—Patent dated June 12, 1860.—This invention consists, first, in combining a friction lifter, pair of anti-friction rollers, tooth, and tongue, with a pestle rod and a double cam, for the purpose of raising and letting fall the pestle or pestles of a quartz crusher or mill.

Second. In combining the screw threaded end of a pestle rod with a female screw in a ratchet plate, for the purpose of imparting to the pestle during its descent a turning motion around its vertical axis, so as to produce a grinding as well as a crushing motion of the pestle.

The inventor says: I claim, first, combining a friction lifter *m*, pair of anti-friction rollers *n*, tooth S, and tongue *r*, with a pestle rod *a*, and a double cam *p p*, in the manner and for the purposes set forth.

Second. Combining the screw threaded end *c* of a pestle rod *a* with a female screw *i* in a ratchet plate *i*, in the manner and for the purposes specified.

No. 28,663.—SAMUEL FRAZER, of Galena, Ill.—*Improvement in the Distillation of Oils from Resin*.—Patent dated June 12, 1860.—This invention consists in producing five different products, or articles of commerce in the shape of oils, designated as No. 1, 2, 3, 4, and 5, all of which are obtained from the distillation of resin by means of a peculiar process.

Claim.—The mode of obtaining oils from resin by distillation, as set forth, by the distillation of resin at the temperatures and in the manner set forth.

No. 28,664.—GEORGE E. FREW, of Brooklyn, N. Y.—*Improved Pen and Pencil Case*.—Patent dated June 12, 1860.—This invention consists in the use of sliding tubes having endless chains attached to them and to the pencil and pen slides.

Claim.—The arrangement of the endless chains D H, tubes B C C¹ E F G J, pen slide I, and pen tube A, substantially as and for the purpose set forth

No. 28,665.—ANDREW J. GOVE, of San Francisco, Cal.—*Improved Wrench*.—Patent dated June 12, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, in combination with the rack or racks on the shank of the movable jaw, the lever and pin or stop connected to the handle for the purpose of holding and releasing the movable jaw, substantially as described.

Second. In combination with the rack on the movable jaw, and the stop and lever on the handle, the coiled spring s, for throwing out the movable jaw when the lever is compressed or the stop raised out of the rack, substantially as described and for the uses and purposes set forth.

No. 28,666.—ELIAS J. HALE, of Foxcroft, Me.—*Improvement in Lamps*.—Patent dated June 12, 1860.—This invention consists in the arrangement and application of a stationary spring catch, or wick retainer, relatively to the lamp cap and the wick tube, made adjustable vertically; also in the combination of a rack, or punctured plate, with the wick tube and the stationary spring catch, applied to the lamp cap and to operate within the movable wick tube.

The inventor says: I *claim* the arrangement and application of the stationary spring catch or wick retainer C, relatively to the lamp cap A, and the wick tube B, made adjustable, vertically, by means substantially as described.

And I also claim the combination of the rack plate g, with the adjustable wick tube B, and the spring catch C, the same being for the purpose specified.

No. 28,667.—A. B. HAWKINS and JOHN PUNTENNEY, of Cameron, Ill.—*Improvement in Moles for Drain Ploughs*.—Patent dated June 12, 1860.—A is the front of the mole made in the form of a sharp tapering wedge, the lower edge a being in advance of the upper edge a¹.

Claim.—As a new article of manufacture, a mole for draining machines constructed in the form and in the manner as above set forth.

No. 28,668.—GEORGE E. HAYES, of Buffalo, N. Y.—*Improvement in Apparatus for Vulcanizing Rubber*.—Patent dated June 12, 1860.—The inventor says: As the rubber compound is gradually softened by warming the flask, it will yield to the pressure, and the reaction of the spring rod will follow up the yielding nature of the softened compound, and thus keep a continual and uniform pressure upon the compound until it is brought within its required dimensions in the flask.

The inventor says: I *claim*, first, a spring clamp constructed and operating for the purposes and as substantially described.

Second. Constructing the flask with a recess I, for the purposes and substantially as set forth.

Third. The circular emboss g¹, in combination with the corresponding depression j³, for the purpose substantially as described.

No. 28,669.—JOHN R. HENSHAW, of Middletown, Conn.—*Improved Self Mousing Hook*.—Patent dated June 12, 1860.—The claim and engravings explain the nature of this invention.

Claim.—As an improved article of manufacture, a mousing hook having a slotted bar g, arranged to open outward, as shown, so that it cannot become entangled in the rigging when otherwise made, as represented and described.

No. 28,670.—NEHEMIAH HODGE, of North Adams, Mass.—*Improvement in Railroad Brakes*.—Patent dated June 12, 1860.—This invention consists in a combination of certain mechanical devices placed upon a locomotive engine and upon the car attached thereto, whereby common atmospherical pressure is used as the force to operate the brake machinery and brakes of the car.

The inventor says: I *claim*, first, the flexible air chamber D, constructed substantially as described, whereby, in combination with the air pump, I employ common atmospherical pressure as the force to operate the brake machinery and brakes of railway carriages, as herein set forth.

Second. The combination of the pump A, chamber B, cock C, and flexible air chamber D, arranged, combined, and operating as and for the purpose above named.

No. 28,671.—JOHN C. HUNTLY, of Philadelphia, Pa.—*Improved Burglar's Alarm*.—Patent dated June 12, 1860.—This invention consists in placing within a cylindrical or other suitably shaped case an ordinary clock alarm, the pallet shaft of which is connected with a peculiar stop mechanism and a lever.

Claim.—The arrangement of the shaft *i*, with its projection *m* and boss *j*, in connection with the hook *n* on the inner plate *l* of the alarm, the arm *g*, with its opening *h* on the pallet shaft *e*, and the clamp *B* attached to the shaft *i*, substantially as and for the purpose set forth.

No. 28,672.—H. WESLEY JELEFF, of Appleton, Ohio.—*Improvement in Dovetailing Machines*.—Patent dated June 12, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement of the obliquely cutting chisels *a a* in combination with the two carriages *j* and *g* and the adjustable gate *B*.

Second. I do not claim the cutter *m*, in Fig. 2, except when arranged and operated substantially as shown and set forth.

No. 28,673.—SHERMAN S. JEWETT, of Buffalo, N. Y.—*Improvement in Cooking Stoves*.—Patent dated June 12, 1860.—This invention relates to the construction and combination of an inner brick oven with outer brick walls.

Claim.—The inner brick oven, constructed as described, in combination with the outer walls of brick *D D*², for the purposes and substantially as set forth.

No. 28,674.—ALFRED JOHNSON, of Philadelphia, Pa.—*Improvement in Hydrants*.—Patent dated June 12, 1860.—This invention consists in so arranging the diaphragm between the piston and valve of a hydrant, when the whole is arranged so as to prevent the pressure due the head of water from forcing the water above the piston, and in the general construction of the hydrant to prevent waste.

Claim.—The diaphragm *E*, when arranged in the described connection, for the purposes set forth.

No. 28,675.—H. L. JUSTICE, of Nashville, Tenn.—*Improved Apparatus for Regulating the Draft and Preventing the Explosion of Steam Boilers*.—Patent dated June 12, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Connecting the piston rod *C* of the piston head *B* with the damper *Q* and the flue doors *u u* by means of the bent lever *G* and the rods *L L* and *P P*, or their equivalents, when the said piston rod *C* is acted upon by the spring *F*, and when it is made to act upon the safety valve *K* by means of the bent lever *H*, all arranged and operating substantially in the manner set forth.

No. 28,676.—JOHN LEE, of Bolivar, Ohio.—*Improved Machine for Forming Cornices of Sheet Metal*.—Patent dated June 12, 1860.—The devices of this machine differ from that described in the patent dated October 8, 1850, in first having the hooks on the roller and the slots in the strip; second, in letting a key or wedge *D*¹ into the roller *D*; third, in the use of the adjustable bearings *A*; fourth, in the extension of the frame to admit of longer or shorter rollers, as may be desired; and fifth, in the addition of the sections.

The inventor says: I *claim*, first, the use of the wedge or key *D*¹ in the roller or cylinder *D*, operating as described and for the purposes set forth.

Second. The arrangement of the adjustable braces *B* and *B*¹ in combination with the sliding braces *A*¹, as set forth.

Third. The arrangement of the slide *E*, brakes *H* and *H*¹, or roller *D*, operating as set forth and for the purposes described.

No. 28,677.—JAMES LORD, of Minersville, Pa.—*Improvement in Fire Arms*.—Patent dated June 12, 1860.—This invention relates to the manner of exploding a percussion cap or pellet within the barrel of a gun or cannon, thereby dispensing with the use of a vent hole, as said cap or pellet is in direct contact with the charge in the barrel, and also for the purpose of protecting the cap against the dampness of the atmosphere.

Claim.—The combination of the parts described for exploding a cap, pellet, or pill within the barrel of a gun or cannon without the use of a vent hole, substantially in the manner and for the purposes set forth.

No. 28,678.—PAUL MARCELIN and ERNEST EUDE, of New Orleans, La.—*Improvement in the Manufacture of Sulphurous Acid*.—Patent dated June 12, 1860.—In operating this furnace, a quantity of sulphur being introduced into it, steam is admitted to the pipes, at the bottom, until the whole mass of sulphur is heated; then, by igniting the sulphur active combustion suddenly commences, the air within the furnace is nearly exhausted, and the furnace is filled

with rich sulphurous acid gas. By opening the regulator, so as to admit a small quantity of atmospheric air, the sulphurous acid gas rises from the furnace through the tube and is conducted away by a suitable pipe to the washer.

Claim.—The above described process of making sulphurous acid gas by the use of steam heat, substantially as described, for the purposes set forth.

No. 28,679.—W. T. McGAHEY, of McGaheysville, Va., and HENRY C. FOOTE, of Fredericktown, Ohio.—*Improvement in Grain Separators.*—Patent dated June 12, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim*, first, a conducting board *d*, with sieve *b*, in combination with a partially perforated screen *i h* and apron *j*, spout *e f*, and angular directors *c*, substantially as and for the purposes set forth.

Second. An inclined plate or board *h i*, which presents a screening and blasting surface on the same plane, in combination with the inclined conducting board *d* and inclined tailing discharge board *j*, substantially as and for the purposes set forth.

Third. An apron *m*, having spouts *n*, in combination with a conducting screen *p*, substantially as and for the purposes set forth.

Fourth. A shoe *a t* containing a conducting board *d*, partially perforated screen *i h*, spout *f*, apron *j*, sieves *k l*, conducting screen *p*, and apron *m*, having spouts *n*, in combination with a single revolving screen *r q*, substantially as and for the purposes set forth.

No. 28,680.—MARVIN MEAD, of Bedford, Mich.—*Improved Tuyere.*—Patent dated June 12, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement, with the case *A*, of the water passages *C C*, the air passage *D*, and the disk *B*, as constructed, the water being made to pass on two sides of the air passage and entirely around the case, as represented, the several parts being connected, constructed, and used substantially as and for the purpose specified.

No. 28,681.—SAMUEL MOORE, of Wellsburgh, Va.—*Improvement in Grinding Mills.*—Patent dated June 12, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The employment of the horned bail *F* in combination with the notched driver *E*, rod *e*, spindle *C*, and stones *A B*, in the manner shown and described, so that the bearing point of the supporting rod *e* upon the spindle will be in a horizontal line or plane with the connecting points between the driver *E* and ball *F*, all as set forth.

No. 28,682.—ALBERT MOREHOUSE, of Farmer, N. Y.—*Improved Water Wheel.*—Patent dated June 12, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination, with the bucket *5*, (which may be either straight or curved,) so inclined as to deflect the water towards the centre of the wheel, with the sheeting *6*, set away from the point of the bucket, to allow a portion of the water to pass between it and the point of the bucket, and so curved as to deflect the water against the next bucket, substantially as and for the purposes set forth.

No. 28,683.—CHARLES MILLER, of St. Louis, Mo.—*Improvement in Lamps.*—Patent dated June 12, 1860.—This invention consists in the interposition of two upright metallic regulators, or wings, on each side of the flame of an ordinary coal oil lamp, which regulators, by means of a thumb screw, are made to impinge upon, partially cutting in two and dividing, the flame. These regulators are made of German silver, curved over at the top to meet the flame with a width at the top equal to the wick to be used.

Claim.—The combination of a cooler with the regulators, as herein described.

No. 28,684.—D. C. MYERS, of Richmondale, Ohio.—*Improvement in Corn Planters.*—Patent dated June 12, 1860.—This invention consists in the arrangement of certain parts in combination with each other, said parts being named in the claim.

Claim.—The arrangement of the hopper *4*, dipping cups *5, 5*, hopper *6*, foot valve *9*, connecting rods and crank by which it is connected to the trip shaft *26*, tripping pins *28*, and connecting rods *16* and *17*, operating the dripping cups; the whole being constructed and operating substantially as described for the purposes set forth.

No. 28,685.—EPHRAIM PIERCE, of Cincinnati, Ohio.—*Improvement in Feed-Water Apparatus for Steam Boilers.*—Patent dated June 12, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The spreader *D*, applied between the flues *B B*, below the water line to the discharge end of a feed water pipe traversing the steam space of a steam boiler, substantially as and for the purpose set forth.

No. 28,686.—A. P. PITKIN, of Hartford, Conn.—*Improvement in Steam Radiators*.—Patent dated June 12, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Making a perpendicular radiator *a*, with the inside connections *f*, and contracted at the bottom, forming the steam, water, and air passages at right angles with the sides, substantially as and for the purpose described.

No. 28,687.—H. A. G. POMEROY, of Providence, R. I., and R. F. HUDSON, of Hartford, Conn.—*Improvement in Ploughs*.—Patent dated June 12, 1860.—This invention relates to that class of ploughs in which a series of rotating ploughs or cutters is employed driven by steam or other power.

Claim.—The combined arrangement of the rotary screw shaped ploughs *C*, on shafts *HHH*, arranged parallel with each other and with the path of motion of the machine, with the oscillating frame *D*, when the whole is constructed and operates as described for the purpose set forth.

No. 28,688.—DAVID D. PORTER, of the United States Navy.—*Improved Marine Propeller*.—Patent dated June 12, 1860.—This improvement consists in a peculiar arrangement of blades and the wing flanches, or repressors, of the centrifugal motion.

Claim.—My improved propeller as constructed with the new arrangement of wings and flanches, substantially as above described and as represented in the accompanying drawings.

No. 28,689.—JACOB POST, of Newark, N. J.—*Improved Door Spring*.—Patent dated June 12, 1860.—The toothed rack *B* and segment *H* operate very much like two eccentrics, the power gradually diminishing as the lever is opened and increasing as the door is brought to a closed state, until the arm *J* is brought into action by coming in contact with the projection *e*, when the spring will act with its greater force on the lever *G*, in consequence of the increased distance from the fulcrum of the lever to the power exerted on the arm *J*, the door will thus be closely shut.

Claim.—The combination, with the sliding spring rod *D* and lever *G*, of the stepped or inclined rack *B*, projection *e*, arm *J*, and segment *H*, in the manner and for the purpose shown and described.

No. 28,690.—JOHN C. RANKIN, of Mount Vernon, N. Y.—*Improved Apparatus for Measuring Liquids*.—Patent dated June 12, 1860.—This invention consists in attaching to the top of a two way cock a vessel composed of metal having a glass face, or a glass cylinder may be used with suitable marks on its face for indicating the several quantities of liquor to be measured therefrom.

Claim.—The arrangement, in combination with the gauge *G* and case *A*, pipe *E*, and two way cocks *F*, of the safety air pipe *J*, as and for the purpose shown and described.

No. 28,691.—CHARLES W. RICHTER, of Madison, Ga.—*Improvement in Vapor Lamps*.—Patent dated June 12, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement of the air pipes *a a D*, and draft tube *C*, as and for the purpose shown and described.

Second. The employment of the cork layer *F*, in combination with the cylinders *E C*, and tubes *a a D*, as shown, for the purpose specified.

Third. The lining of cork *h*, or other suitable non-conducting substance, placed in the upper part of the wick tube *G*, in connection with the cork or other non-conducting substance *k*, attached to the under side of the button *j* of tube *i*; *k* and *i* being arranged relatively with the top of the wick *H*, to operate as and for the purpose specified.

No. 28,692.—EBEN SEAVEY, of Boston, Mass.—*Improved Fire Brick*.—Patent dated June 12, 1860.—The inventor says: This fire brick is constructed with main and lateral air conduits or passages. It also has a curved form, by which it may fit closely to the inner surface of a metallic fire pot when used therein.

Claim.—Improved fire brick lining, as made with ribs and air channels or ducts combined or arranged relatively to each other, substantially as specified.

No. 28,693.—DANIEL H. SHIRLEY, of Boston, Mass.—*Improved Table Plates*.—Patent dated June 12, 1860.—This invention consists in forming upon the rim of a plate used for table purposes one or more depressions, or receptacles for the reception of any desired articles of food, such as sauces, vegetables, condiments, &c.

Claim.—A plate formed with one or more depressions or receptacles in its rim, for the purpose specified.

No. 28,694.—GEORGE SMITH, of Macon, Georgia.—*Improved Hose Pipe*.—Patent dated June 12, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The hose pipe described, when made in such a way that several nozzles or short sections of pipe are made to be coupled together and secured by means substantially as set forth, for the purpose described.

No. 28,695.—OLIVER SNOW and HEMAN S. SNOW, of West Meriden, Conn.—*Improvement in Lamps*.—Patent dated June 12, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The method of securing the chimney in its position for use, by means of springs attached to the deflector operating on the inside of the chimney so that no outside circle points on other holders are needed, when the whole is constructed and fitted for use substantially as described.

No. 28,696.—OTIS W. STANFORD, of Cincinnati, Ohio.—*Improved Churn*.—Patent dated June 12, 1860.—A is a common upright churn tub, whose bed B has an extended tubular boss *b* to guide in a vertical path the dasher rod C; D represents a spherical, or spheroidal, dasher *j*, journalled loosely to the lower end of the rod C, and secured thereon by a screw and washer E F, or their equivalents. The body of the dasher is of smaller diameter than the inside of the tub and has spiral wings *d* whose peripheries nearly touch the sides of the tub.

Claim.—The described combination with a vertical, circular tub A, of the reciprocating rod C, spherical or spheroidal dasher D, and spiral wings *d*, fitting the interior of the tub, the said parts being constructed and arranged in the manner and for the purposes set forth.

No. 28,697.—ALFRED STAUCH, of Philadelphia, Pa.—*Improvement in Apparatus for Inoculating*.—Patent dated June 12, 1860.—This invention consists in combining the various processes and operations required, thereby securing greater efficacy in applying Baunscheidtism by means of a circular hair brush *k* fastened around the needles by a ring; and also in removing and avoiding the disagreeable scratching of the skin by the needles by means of a spring *h*, which keeps the piston *p* steady and secures the instantaneous and spontaneous withdrawal of the needles from the skin after the operation has been performed.

Claim.—The combination and arrangement of the chamber *b*, piston *p*, spiral spring *h*, circular hair brush *k*, and ring *g*, with the tube *a*, spring *d*, and needles *n*, in the manner and for the purpose specified.

No. 28,698.—WILLIAM H. STEVENS, of Syracuse, N. Y.—*Improved Toy Gun*.—Patent dated June 12, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, constructing the metallic wire bow A, with one or more coils D, substantially in the manner and for the purpose stated.

Second. Providing bows with metallic wire springs C, when the same are made with joints E, for the purpose stated.

Third. Connecting the arrow or projecting rod N with the bow string, substantially as stated.

Fourth. The loading chamber, when so arranged with respect to the muzzle as to operate substantially in the manner set forth.

Fifth. The attachment to the muzzle of the gun of a yielding or elastic material (as the springs P, or equivalent device,) when the same operates to hold the ball substantially in the manner set forth.

Sixth. The arrangement of the several parts, or their equivalent, substantially as described, and operating as a whole, substantially in the manner and for the purpose stated.

No. 28,699.—ISAAC C. TATE, of New London, Conn.—*Improvement in Faucets*.—Patent dated June 12, 1860.—This invention consists in combining with an India rubber diaphragm two springs, one for the purpose of depressing the diaphragm and shutting the faucet, and the other to force the diaphragm up when the faucet is to be opened, together with a knuckle in combination with the valve and diaphragm, and with two springs for the purpose of raising the valve and opening the faucet.

Claim.—The arrangement and combination of the India rubber diaphragm C, valve E, heavy spring G, light spring H, and knuckle F, constructed and operating substantially in the manner and for the purpose stated.

No. 28,700.—JAMES S. TOPHAM, of Washington, D. C.—*Improved Hame, Tug, and Buckle*.—Patent dated June 12, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the tug A, the clip D, and the pin B; the clip being in two parts and screwed to the tug, and the pin being provided with a head on one end and a screw near the other, when the same are used substantially as and for the purpose specified.

No. 28,701.—WILLIAM TRAPP, of Elmira, N. Y.—*Improved Stave Machine*.—Patent dated June 12, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the annular cutter stock H, as constructed, for enabling the staves to pass close to the path of the outer revolving cutters, in the manner substantially as described.

Second. So arranging and operating the two sets of revolving cutters K and K¹, that they will act simultaneously, but in opposite directions, in the manner substantially as and for the purposes set forth.

Third. The manner of adjusting the two sets of revolving cutters K and K¹, so as to dress properly staves of various thicknesses, by raising or depressing the disk L of the inner cutters K¹, in the manner substantially as specified.

Fourth. The arrangement, in relation to each other, of the two beds M and M¹, as constructed, for the purposes set forth.

Fifth. In combination with the stave-dressing machine N, I claim the rocking plane Q, as constructed and arranged, for the purposes described.

Sixth. The adjustable spring lever U U¹, as arranged, for regulating the pressure of the feeding rollers, in the manner substantially as set forth.

Seventh. In combination with the feed box N, I claim the sliding spring carriage X, as constructed and arranged for the purposes set forth.

No. 28,702.—JOSEPH VILLET-COLLIGNON and LOUIS GEORGE, of Paris, France.—*Improvement in Typography*.—Patent dated June 12, 1860.—This invention consists of combined types of two or more letters, composed each of two or more types of single letters united by solder or cement.

Claim.—The combined types described, composed each of two or more single types united by suitable solder or cement.

No. 28,703.—RICHARD VOSE, of New York, N. Y.—*Improvement in Car Springs*.—Patent dated June 12, 1860.—This invention consists in being essentially composed of disks *c c* of India rubber and concavo-convex metallic springs *e e*, arranged with metallic caps *a b*, and externally grooved metallic rings *d d*, in such a manner that the two descriptions of springs are enabled to act and react upon each other.

Claim.—The arrangement and combination of the India rubber disks *c c*, with the concavo-convex metallic springs *e e*, in my improved car spring, substantially in the manner and for the purpose set forth.

No. 28,704.—EDWARD WADE, of Norwich, Conn.—*Improvement in Pumps*.—Patent dated June 12, 1860.—This invention consists in the arrangement of a horizontally rotating cam disk, in combination with a rising and falling yoke, and with a series of lazy tongs, in such a manner that by rotating the disk a rapid reciprocating motion is imparted to a pump piston or other part of a machine attached to the extreme end of the lazy tongs.

Claim.—The arrangement and combination of the horizontally rotating cam disk A, rising and falling yoke F, and series of lazy tongs G, constructed and operating substantially in the manner and for the purpose specified.

No. 28,705.—WILLIAM WATSON, of Lowell, Ill.—*Improved Neck Stock*.—Patent dated June 12, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A stock of hard vulcanized gum as a new article of manufacture.

No. 28,706.—WILLIAM H. WILEY, of Lockport, N. Y.—*Improved Butter Worker*.—Patent dated June 12, 1860.—This invention consists in arranging the several parts of the worker, as shown in the claim and engravings.

Claim.—The arrangement of the revolving table F upon the platform A, the head or worker E, the standard D, which is adjustable laterally and horizontally, the lever C and the slide G, when the same are used substantially as and for the purpose specified.

No. 28,707.—RICHARD WILLIAMS and SAMUEL WILSON, of Buffalo, N. Y.—*Improved Feathering Paddle Wheel*.—Patent dated June 12, 1860.—H H¹ H² is a cylindrical drum, to which the arms I of the wheel are firmly attached by bolts, screws, or otherwise, and which revolves around the stationary core A. The head or hub H¹ of this drum has a journal bearing, and revolves upon the stationary shaft B, while the hub H² is made fast to the shaft J, which shaft revolves, having a journal bearing at K.

The inventors say: We *claim* the stationary cam-grooved core A, in combination with the crank shaft of the paddle and revolving cylindrical drum H H¹ H², for the purpose substantially as described.

We also claim, in combination with the above, the arrangement with the stationary shaft B, revolving shaft J, and drum heads or hubs H¹ H², substantially as set forth.

No. 28,708.—S. E. WOODWORTH and J. S. WETHERED, of San Francisco, Cal.—*Improvement in Gas Burners*.—Patent dated June 12, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The introduction of atmospheric air into the centre of the gas flame, in the manner substantially as described, and for the uses and purposes set forth.

No. 28,709.—WENDELL WRIGHT, of New York, N. Y.—*Improvement in Gas Burners*.—Patent dated June 12, 1860.—The engraving shows the partition plate A dividing the chamber of the burner, which is round, and about an inch long, and half an inch in diameter, in two parts; also the slit F, through which all the gas passes, to the flame, and the swinging valve B with the piston rod C connected therewith.

Claim.—The partition plate A, in combination with the piston C, and valve B, as described, and for the purposes set forth.

No. 28,710.—LOUIS YALE, JR., of Philadelphia, Pa.—*Improvement in Locks*.—Patent dated June 12, 1860.—M is the pod case, attached by a swivel pin s to the handle. This pod case fills the key chamber, and remains stationary while the handle revolves to move the other works by means of the key wheel, &c. It is in turn filled with the pod bits, which it holds in position while in the lock, ready for the driver F to displace by moving it perpendicularly up through it.

Claim.—The pieces M and F, when used in the manner, or an equivalent manner, and for the purpose substantially as described.

No. 28,711.—M. R. CLAPP, of Seneca Falls, N. Y., assignor to SILSBY, MYNDERSE & Co., of said Seneca Falls.—*Improvement in Steam Boilers*.—Patent dated June 12, 1860.—This invention consists in a certain arrangement of water tubes in couples, one within another, within the fire box of a boiler, with the lower end of both extending below the gate, and their upper ends even, or nearly so, with the crown of the fire box and below the surface of the water.

Claim.—The arrangement of the inner tubes G G, loosely within the outer one, with the lower ends below the fire, and both their upper ends below the water level, substantially as specified.

No. 28,712.—GEORGE W. BANKER, of Medford, Mass., assignor to himself and GEORGE O. CARPENTER, of South Reading, Mass.—*Improved Method of Securing Heads in Barrels*.—Patent dated June 12, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Securing the heads of barrels or kegs, when composed of a series of staves, by means of a screw, as set forth, for the purpose specified.

No. 28,713.—WILLIAM E. DURKEE, of Fort Edward, N. Y., assignor to himself, A. S. WILLIAMS, and JOSEPH H. HOPKINS, of said Fort Edward.—*Improvement in Hay Elevators*.—Patent dated June 12, 1860.—This invention consists in constructing an inclined framework that is braced together in a firm way, and which is pointed to suitable supports in such a way that wagons or carts, or anything loaded with hay or grain, may be drawn up the inclined plane into the barn window or in stacks.

Claim.—The supporting frame A, the inclined plane C, jointed to the same, and the several parts combined therewith, as described, for purposes set forth.

No. 28,714.—EDWARD A. GODFREY, of Hartford, Conn., assignor to ROGERS, SMITH & Co., of said Hartford.—*Improvement in Soldering Handles for Cutlery*.—Patent dated June 12, 1860.—The object of this invention is to facilitate the securing together of the two longitudinal parts of the metal handles for cutlery, so that said parts may be readily clamped, and at the same time held together for the purpose of being united by soldering.

Claim.—The rods A A, attached at one end to the cap B, and having a plate D, springs F F, and nuts E E fitted on them, substantially as and for the purpose set forth.

No. 28,715.—EDWARD A. GODFREY, of Hartford Conn., assignor to ROGERS, SMITH & Co., of said Hartford.—*Improvement in Soldering Handles for Cutlery*.—Patent dated June 12, 1860.—The object of this invention is to obviate the necessity of wiring the handle on the tang as heretofore done, in order to solder the handle to the tang, and thereby effect a considerable saving of time, and greatly facilitate the work.

Claim.—The swivel plate D, with the adjustable plate H, and rods F F attached; the whole being arranged to form a clamp, substantially as and for the purposes set forth.

No. 28,716.—ANDREW I. GOVE, of San Francisco, Cal., assignor to himself and WETHERED & TIFFANY, of said San Francisco.—*Improved Ship's Windlass*.—Patent dated June 12, 1860. The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the gearing, as represented by G and I¹, with the crank plates or arms H H, combined with the connecting rods S S, the levers K K, and pawls P P, working the windlass C, substantially as described, and for the purposes set forth.

No. 28,717.—JOHN C. JENNISON and AUGUSTUS HALE, of Foxcroft, Me., assignor to ELIAS J. HALE and AUGUSTUS HALE, of said Foxcroft.—*Improvement in Lamps.*—Patent dated June 12, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim* the arrangement and application of the spring clasp and its angular notches to the chimney carrier, so as to enable the clasp to be turned upward from, and to operate with, the notches, and confine the chimney in place in the carrier, substantially as described.

We also claim the improved chimney carrier, as made to embrace and close down upon and connect to the lamp cap, and be separate from the deflector, and to have a shell or flanch for supporting the chimney arranged upon it, essentially as specified.

No. 28,718.—ENOS M. LEWIS, of Philadelphia, Pa., assignor to himself and GEORGE WILLIAMS, of said Philadelphia.—*Improvement in Slide Valves for Steam Engines.*—Patent dated June 12, 1860.—This invention consists in the combination of a slide valve of the form of a hollow box, an outer box or casing rollers, certain springs, or their equivalents, and a follower, forming a stuffing box between the said outer casing and the valve; the whole being so constructed and arranged that the pressure of the steam may be removed from the valve, and sustained by the rollers of the outer box.

Claim.—The combination of the valve B, outer box or casing D, its rollers *d d*, springs *ff*, or their equivalents, and the follower C; the whole being constructed and arranged substantially as and for the purpose set forth.

No. 28,719.—THOMAS MORRISON, of Kingston, N. Y., assignor to C. B. SAFFORD, of said Kingston.—*Improved Chronometer Escapement.*—Patent dated June 12, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arm B (Fig. 1) of the depecting bar, the form and peculiar position of the feather spring D, acting in combination with and attached to the depecting bar A as a lever, the pin C in the arm of the depecting bar, the notches F and G in the friction roller (Fig. 2) attached to the balance wheel, and the combination of the parts, (as shown in Fig. 3,) substantially as set forth and described.

No. 28,720.—LEVI SHORT, of Buffalo, N. Y., assignor to himself and CHARLES S. PIERCE, of said Buffalo.—*Improvement in the Manufacture of Illuminating Gas.*—Patent dated June 12, 1860.—In using this invention the retort A is to be filled with coal oil. In first starting the apparatus the retort *c* is to be heated with an alcohol or fluid torch until sufficient gas is made to supply the furnace from the gasometer. The gas from the gasometer is then turned on so as to pass through the pipe I into the furnace. It is then lighted, and burns on the surface of the wire gauze *h*, the flame striking the concave plate *c*², of the retort, which soon becomes red hot, a draft being through the spaces left between it and the walls of the retort house. The retort soon becomes heated, then the oil is turned on so that it will fall about two drops a second, when it is soon converted into gas.

The inventor says: I *claim*, first, a gas furnace D, constructed and operated substantially as described, in combination with the retort C, and retort house B, for the purposes set forth.

Second. I claim the relative arrangement of the oil reservoir A, retort house B, including the retort and furnace, purifier L, and gasometer N, substantially as described, for the purposes set forth.

No. 28,721.—ISAAC N. WHITAKER, of Foreston, Ill., assignor to himself and J. H. FREES & M. HELLAR, of said Foreston.—*Improved Apparatus for Heating Wagon Tires.*—Patent dated June 12, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination, with the outer periphery of the tire box B, of the furnace D, and smoke box C, when the said tire box is arranged to stand vertically, as shown, and is provided in its upper part with rollers J J, by which the tires are suspended and rotated; all as set forth and represented, for the purpose specified.

No. 28,722.—SAMUEL H. WHITAKER, of Cincinnati, Ohio, assignor to himself and WILLIAM L. THOMAS, of said Cincinnati.—*Improvement in Gas Regulators.*—Patent dated June 12, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, in the described connection with receiving and discharging chambers A and B, and a stationary seat F, supported on a stem which passes through the diaphragm, the valved diaphragm D E, or its equivalent, operated by the unequal pressures, on its opposite sides, of the entering and escaping gas, substantially as set forth.

Second. The nut H, rod G, and seat F, in the described combination with the valve E, for the purpose of adjusting the capacity of the apparatus from the exterior.

No. 28,723.—HARRY ABBOTT, of North Huron, N. Y.—*Improved Churn*.—Patent dated June 19, 1860.—The milk or cream, passing through the rods *g g* of the dashers E E, is violently agitated, while the rods *o o* of the auxiliary dashers, which have opposite and antagonistic motions, being arranged at right angles to the rods *g g*, break the currents and allay the agitation on the surface, and thereby prevent the milk or cream being dashed upward in the churn body.

Claim.—The combination and arrangement of the dashers E E, guided in their motions by the vertical grooves *b b*, and inclined grooves *i i*, or their equivalents, with the auxiliary counteracting dashers G G, constructed and operating substantially as and for the purposes specified.

No. 28,724.—WILLIAM HENRY ALLEN, of Brooklyn, N. Y.—*Improved Steam Pressure Gauge*.—Patent dated June 19, 1860.—The action of the gauge is as follows: The steam or other fluid, pressing equally against the lower surfaces of both pistons C C, forces them upward and overcomes the pressure of the spring in a greater or less degree, and so brings the index *d* to a higher or lower point on the scale J, and indicates thereon the pressure of steam, or other fluid, and the spring and its piston F, and piston rod *g*, being midway between the two pistons C C, are acted upon directly by the pressure on the said pistons, without any tending to racking or distortion.

The inventor says: I *claim* the combination of the two cylinders B, pistons C C, and adjustable cross head D, with the central indicating rod G, spring E¹, and spring box E E, in the manner and for the purpose shown and described.

I also claim the arrangement and combination of the caps H H, in combination with the plate G, and cylinders B B, as shown and described, so that said caps will serve to cover the cylinders B B, to guide the piston rods *b b*, and also to confine the plate G, all as set forth.

No. 28,725.—EDWARD ANDREWS and JOSEPH H. CARR, of Palo Alto, Pa.—*Improvement in Lubricating Journals*.—Patent dated June 19, 1860.—This invention consists in an arrangement of spring valve or valves for filling an air tight chamber in the centre of the journal with a lubricating material, an escape for the air while filling, and a spring pad over an aperture to the air tight chamber to prevent the too free passage of the lubricating material to the surface of the journal.

The inventors say: We *claim*, first, the pad E, and spring D, when used for the purpose as fully specified and described.

Second. The combination and arrangement of the plug F, valve H, cross piece J, air escape O, and guard piece M, constructed and operated substantially as and for the purpose specified.

No. 28,726.—DAVID BAKER, of Harwick, Mass.—*Improved Spout and Lid of Pitchers*.—Patent dated June 19, 1860.—This invention consists in providing the spouts of molasses pitchers, or other vessels, with a receiving chamber, either separately or in combination with an inner lid; the same being so disposed and arranged as to prevent the drippings of the liquids reaching the outside of the cup or vessel, the same being arrested and returned back into the vessel by a channel formed between the spout and an outer lip surrounding the same.

Claim.—The combination and arrangement of the channel *a a a*, the lid B, the outer lid A, and the lever C, substantially as and for the purpose specified.

No. 28,727.—SAMUEL BARLEY and J. H. BARLEY, of Longwood, Mo.—*Improvement in Harvesters*.—Patent dated June 19, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim*, first, the arrangement of the rake bar and head *e¹ e²*, to operate in combination with the guard plate S, crank *d¹*, shafts C C, and platform I, as shown and described.

Second. We do not claim, broadly, the invention of the divider, but we do claim the arrangement of the horn shaped divider T, to revolve, so that it can be adjusted to any desired position, in the manner shown and described.

No. 28,728.—HENRY BARRINGER, of Wataga, Ill.—*Improvement in Machines for Upsetting Tire*.—Patent dated June 19, 1860.—This improvement in tire upsetting machines relates to the clamping of tires between movable jaws preparatory to the operation of upsetting or contracting the tire.

Claim.—The combination of the movable segment clamping lever D, rocking piece F, block G, and clamping portion H, when arranged in a manner to produce the result set forth.

No. 28,729.—LAFAYETTE BARTOO, of East Aurora, N. Y.—*Improved Sash Fastener*.—Patent dated June 19, 1860.—A is the window casing; B B¹ are the window sash; C C¹ are spring stops which hold the lower sash in the frame, and guide it when raised or lowered; h is a catch projecting from the stop C¹, which catches into the series of holes i, in the upper sash B¹, and operating in the same manner as the stop C and catch f.

Claim.—The spring stops C and C¹, having the catches f and h, for the combined purposes as specified.

No. 28,730.—CHARLES F. BAXTER, of Boston, Mass.—*Improvement in Furnaces*.—Patent dated June 19, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination of a double cylinder steam generating fire pot, with pipes E E, substantially as described and for the purposes set forth.

I also claim the arrangement of the steam generating fire pot F, to stand apart from, but within the inner wall J of the hot air chamber H, so that the exterior surface of the fire pot will be constantly surrounded by the hot products of combustion, as shown.

I also claim the arrangement of the oven G, directly above the fire pot F, but within the inner wall J of the hot air chamber H, as shown.

No. 28,731.—SIDNEY A. BEERS, of Brooklyn, N. Y.—*Improvement in Iron Rails for Street Railroads*.—Patent dated June 19, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the construction and use of a box or coping rail for street railroads of such width as to accommodate a car and carriage track, in combination and of such depth as to give strength to the rail, whether the same is laid with or without a continuous string piece, constructed substantially as described.

In combination with the rail constructed substantially as described, I also claim the wedge and cleats, for the purpose set forth in the accompanying specification.

No. 28,732.—ALBERT BIGELOW, of Hamilton, Upper Canada.—*Improvement in Steam Ploughs*.—Patent dated June 19, 1860.—This machine is erected and properly secured to a good substantial frame of timber, which frame N¹ is carried by a pair of driving wheels marked N, and in front by a pair of smaller or leading wheels N², provided with ordinary gearing to be worked by hand, or by the engine, for the purpose of guiding it to the right or left.

The inventor says: I *claim*, first, the arrangement, with the main supporting frame N¹, and with the endless chain D, and ploughs C C C, of the auxiliary radius frame Q R, wheels F, transverse shaft O, and longitudinal shaft A, substantially in the manner and for the purposes described.

Second. The arrangement of the chains E, radius frame Q R, and adjusting mechanism G G¹ G² G³, substantially as and for the purposes set forth.

No. 28,733.—SYLVANUS F. BROOKS, of Weston, Mass.—*Improved Game Box*.—Patent dated June 19, 1860.—A represents a shallow quadrangular box surrounded with a neat frame, and having a glass plate a within the frame to form the top of the box; the top, bottom, and three sides are thus closed. In this box slides a drawer B, which is made to fit nicely in its place; this drawer is divided into four side apartments C, and one large middle apartment D, which is in size equal to the space enclosed by the frame, and the side apartments are in width equal to that of the frame.

Claim.—The box A, with its frame and glass plate, in combination with the drawer B, and its furniture, as set forth, for the purposes specified.

No. 28,734.—JOHN M. CARLISLE, of Greenwood, S. C.—*Improved Machine for Sawing Shingles from the Bolt*.—Patent dated June 19, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The employment or use of the two saws H I, having respectively oblique and parallel cutting planes relatively with the end of the bolt O, in connection with a rectilinear feed movement of the bolt, all being arranged and operated substantially as and for the purpose set forth.

No. 28,735.—CHARLES B. CARPENTER, of North Attleboro, Mass.—*Improvement in Watch Chains*.—Patent dated June 19, 1860.—The claim and engravings explain the nature of this invention.

Claim.—My improved manufacture of jeweler's chain, as constructed, with each link having two arms a a, two scales b b, and a connection c, arranged and applied to a succeeding link, as described.

No. 28,736.—JAMES CHESLEY, of Concord, N. H.—*Improved Boot and Shoe Cleaning Apparatus*.—Patent dated June 19, 1860.—The operation of this invention is as follows: By drawing the foot across the scraper and brushes D E E the bottom of the boot or shoe is thoroughly cleaned, and at the same time the dirt and dust are allowed to pass through the open spaces *b b b*, into the draw below. By pushing the foot into the oval formed brush B B C C, formed of the two upright and quarter round brushes, the top of the boot or shoe is cleaned, and at the same time the dirt is allowed to pass freely through the open spaces *a a a*.

Claim.—The arrangement of the frame A, the brushes B and C and E, the scraper D, the spaces *a*, and the draw H, substantially as and for the purpose specified.

No. 28,737.—CHARLES W. CLEWLEY, of Providence, R. I.—*Improved Method of Constructing Rims for Watches*.—Patent dated June 19, 1860.—This improvement consists in the use of a combined forming and cutting die D and plunger A, by which the rim is formed out of sheet metal at a single operation.

Claim.—The use of a combined die and cutter D, and a plunger A, in combination with the same, or their equivalents, the two so combined operating in the manner substantially as described for the purposes specified.

No. 28,738.—CORNELIUS COLLINS, of Brooklyn, N. Y.—*Improvement in Machinery for Making Wire Rope*.—Patent dated June 19, 1860.—The object of this invention is to obtain a machine adapted to lay a number of wires in one or more convolutions around a central strand, or core, while avoiding any twisting of the separate wires.

Claim.—The combination of the standard B, fixed crank C, disks D and E, cranks F, and reels R, the whole being arranged and operating in the manner and for the purposes set forth.

No. 28,739.—E. M. CORBETT, of New York, N. Y.—*Improvement in Photographic Cameras*.—Patent dated June 19, 1860.—The object of this invention is to construct the camera so that it serves for taking stereoscopic pictures, and also for taking ordinary photographic pictures, particularly that kind where a great number of impressions are to be taken.

The inventor says: I *claim*, first, the combination, with the plate holder G, of the double combination slide D, constructed and operating substantially as and for the purpose set forth.

Second. Arranging the main slides *d d¹* of the slide D, with central rails *ff¹*, substantially in the manner and for the purpose described.

Third. The arrangement and combination of the double adjustable lenses E, slides *ee^{*} e¹ e^{1*}*, and adjustable plate holder G, constructed and operating substantially in the manner and for the purpose set forth.

No. 28,740.—CHARLES W. CROSLY, of New York, N. Y.—*Improved Fire Escape*.—Patent dated June 19, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The application to large canvas tubes of metallic and India rubber bands, which will gradually stretch at a given pressure, and allow the person entering the tube to escape from the burning building without the slightest injury, as described, using for that purpose the metallic and India rubber ring or band, or any other substantially the same, and which will produce the intended effect.

No. 28,741.—CHARLES A. DESOBRY, of Plaquemine, La.—*Improvement in Bagasse Furnaces*.—Patent dated June 19, 1860.—This invention consists in the construction of the fire chamber of the furnace, of square or other polygonal form in its horizontal section, with its outlet at one angle and with doors arranged at its other angles, for the introduction of rakes or pokers in such a manner as to provide for the clearing of the outlet and the prevention of the choking of the draft, and for the stirring of the fuel on all parts of the hearth.

Claim.—The arrangement of the outlet B, and the openings *ff¹*, in combination with each other, and with the square or polygonal fire chamber, substantially as and for the purpose set forth.

No. 28,742.—WILLIAM DOUGHERTY, of Philadelphia, Pa.—*Improvement in Machines for Grinding Saws*.—Patent dated June 19, 1860.—This improvement consists of a block with inclined sides for receiving the saw blades to be ground, the said block being combined with, and arranged in respect to two revolving grindstones, and a horizontal as well as vertical motion being imparted to, the block by the devices described, or their equivalents, so that the blades may be so far reduced as to have the desired taper or variation in thickness as well as a uniform and smooth surface.

Claim.—The block G, with its inclined sides, in combination with, and arranged in respect to, the two revolving grindstones E and E¹, when a vertical as well as horizontal reciprocating motion is imparted to the said block G, by the devices set forth, or their equivalents.

No. 28,743.—JAMES B. DUFF and T. W. KEATING, of New York, N. Y.—*Improvement in Machines for Measuring the Strain on Pulley Belts*.—Patent dated June 19, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Uniting the ends of the belt by an elastic material placed on a clasp or fixture constructed with arms attached to the belt and indicator and scale, in the manner and for the purposes described.

No. 28,744.—A. K. EATON, of New York, N. Y.—*Improvement in the Treatment of India Rubber*.—Patent dated June 19, 1860.—This invention consists in the combination of the oxide of aluminum, or pure alumina, with the caoutchouc and sulphur, or with gutta percha and sulphur, or its combination with any other agent than sulphur, that will affect or influence the curing of these gums.

Claim.—The combination of oxide of aluminum with sulphur and caoutchouc or allied gums, and the treatment of the compound, in the manner substantially as specified.

No. 28,745.—WILLIAM FUZZARD, of Charlestown, Mass.—*Improvement in Surfacing Fibrous Materials*.—Patent dated June 19, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The employment or use, in connection with a heated surface, of an apron formed of any textile or other similar or suitable fabric, as a vehicle to convey and discharge on the fibrous web the surfacing compound or materials.

No. 28,746.—JOSEPH GEIERMANN, of Albany, N. Y.—*Improvement in Sewing Machines*.—Patent dated June 19, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of two shuttles and one needle, operating together so as to form with three threads a stitch, substantially as described and in the manner specified.

No. 28,747.—E. P. GLEASON, of Providence, R. I.—*Improved Die Plate for Cutting Screws*.—Patent dated June 19, 1860.—This invention consists in combining with the thread cutting dies a like number of smooth steel jaws situated directly beneath the dies in a receiver formed for their reception, the same being acted upon by a separate set of scrolls, formed upon the reverse side of the circular plate in a manner to surround in a loose embrace the pipe or rod to be threaded, for the purpose of giving direction to the cutting dies and to insure a true and correct inclination of the thread, relatively with the outer surface of the object to be threaded.

Claim.—Combining with such die plates the guiding jaws *l l l l*, or their equivalent, in the manner and for the purpose specified.

No. 28,748.—WILLIAM D. GRIMSHAW, of Newark, N. J.—*Improved Hot Air Engine*.—Patent dated June 19, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the employment of the solid metallic packing I, in the manner substantially as shown and described, so that when a sufficient degree of heat is applied to the engine the packing will melt and remain in a fused state until the heat is withdrawn, as set forth.

I also claim the heating of the air or steam by bringing it in contact with the fused metallic packing I, substantially as and for the purpose shown and described.

I also claim the covering of the fire chamber C with the metallic packing I, which fuses on being heated.

I also claim the combination of the pipe E, cylinder C¹, piston F, and packing I, in the manner and for the purpose shown and described.

I also claim the introduction of air or steam between the surface of the fusible packing I and the interior of the piston F, substantially as and for the purpose shown and described.

No. 28,749.—ELIAS J. HALE, of Foxcroft, Me.—*Improvement in Lamps*.—Patent dated June 19, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* my improved wick retainer, as made, not only with a spring clasp by which it may be readily attached to, or detached from, the cap, as described, but so as to extend up through the lower end of, and into, the wick tube and against the wick, essentially as specified.

No. 28,750.—JOHN P. HAYES, of Philadelphia, Pa.—*Improvement in Making Plumbers' Joints*.—Patent dated June 19, 1860.—This invention consists in providing a mould or case with a secondary chamber, whereby the melted metal which is used in making the required joint is caused to pass in contact with the pipes therein, so as to first strongly heat or partially melt, and thus prepare them for intimate union or combination, when both chambers in the mould become filled with the said metal, and also in the employment, in combination with a mould adapted for making plumbers' joints by melting the ends of the pipes together, of a tubular protector within the said pipes.

The inventor says: I *claim* a mould or case provided with a secondary chamber *f*, to operate substantially in the manner and for the purpose set forth and described.

I also claim, in combination with a mould or case adapted for making plumbers' joints in pipes by the process of melting the ends of the said pipes, as described, the employment of a tubular protector C, as and for the purpose specified.

No. 28,751.—WILLIAM A. HERRICK, of Leeds, Me.—*Improvement in Coupling and Uncoupling Cars*.—Patent dated June 19, 1860.—A is the draw bar; *b* is the shackle bolt; *c c* is the lever for lifting and depressing the shackle bolt; this lever is curved downward in its middle part, where it is attached to the bolt; *e e e* is a bent lever, of round iron.

Claim.—The combination and arrangement of the levers *c c* and *e e*, constructed and operating substantially as described in the specification.

No. 28,752.—CHARLES W. HIGGINS, of Somerville, and ALBEN S. WILLARD, of Charlestown, Mass.—*Improved Clothes Wringer*.—Patent dated June 19, 1860.—This invention relates to the method of releasing the wringing cylinder or bag from its twist, and causing it to extend itself, by an automatic movement, after the water has been expelled from it.

Claim.—The arrangement and combination of the sliding shaft of pinion D with pinion E, for operating the bag B, substantially in the manner and for the purpose set forth.

No. 28,753.—CHARLES J. HOBE, of New York, N. Y.—*Improved Machine for Bundling Fire Wood*.—Patent dated June 19, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the employment of a reciprocating knife C, more or less curved, in combination with the relatively shaped hollow bottom of the hopper B, both operating together, for the purpose of gathering, cutting off, and thus forming conjointly between them a bundle of wood of the size and shape required, the whole substantially as described.

Second. The employment of a conical or tapering hole *f*, substantially as described, as a simple means of effectually compressing within it the aforesaid loosely gathered bundle, and to firmly hold it while receiving the cord.

Third. The combination of said hole *f* and the plunger E, for forcing the bundles into and through said hole, arranged and operating substantially as described.

Fourth. The method of arranging the cords *h* on an adjustable sleeve G and fixed drum H¹, or their equivalents, substantially as described, enabling the operator to quickly adjust a large number of cords at a time, and to have them at hand in such convenient position, so that said cords can be readily passed, one after another, on to the cord carrier H, when required.

Fifth. The arrangement of the reciprocating tubular cord carrier H, and the combination of the same, and the fingers I, constructed and operating substantially as and for the purpose set forth.

Sixth. The arrangement of the doubly flanged bundle remover K¹ attached to a vibrating arm K, or its equivalent, when operating as and for the purpose specified.

Seventh. The arrangement and combination of the knife C, hopper B, hole *f*, plunger E, drum H¹, and sleeve G, cord carrier H, fingers I, and bundle remover K¹, constructed and operating substantially in the manner and for the purpose specified.

No. 28,754.—HENRY S. HOLMES, of Lynn, Mass.—*Improvement in Congress Boots*.—Patent dated June 19, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Securing the edges of the gores to the gaiter tops and lining by a seam common to all, in the manner and for the purpose substantially as set forth.

No. 28,755.—J. NELSON JACOBS, of Worcester, Mass.—*Improved Portfolio Paper File*.—Patent dated June 19, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination, with the two boards, when attached together by a back B, as set forth, of the cords D D attached to the edge of one board, eyes G G attached to the edge of the other board, and the elastic straps E E, forming a self-holding, self-adjusting, book-shaped portfolio, substantially as set forth.

No. 28,756.—JABEZ JENKINS, of Philadelphia, Pa.—*Improved Composition for Lining Safes*.—Patent dated June 19, 1860.—This invention consists in the employment of copperas or sulphate of iron, mixed with plaster of Paris or some other suitable material, as a composition for the purpose of lining fire proof safes.

Claim.—The employment of copperas or sulphate of iron, mixed with plaster of Paris or some other suitable material, in the manner described, for the purpose set forth.

No. 28,757.—SAMUEL A. KERR, of Arbor Hill, Va.—*Improved Churn*.—Patent dated June 19, 1860.—This invention consists in arranging blades or slats on a vibrating or turning

dasher staff, so that they pass diagonally through the staff or are set obliquely, one above another, after the manner in which the slats of a window blind are framed.

Claim.—The manner, described and shown, of arranging the blades or slats *a a* on a vibrating or turning dasher staff, for the purpose set forth.

No. 28,758.—RUFUS LAPHAM, of New York, N. Y.—*Improvement in Blowers.*—Patent dated June 19, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The application of an India rubber or flexible tube, closed at both ends elliptically and held and operated upon by plates and a lever, substantially as and for the purposes set forth.

No. 28,759.—THOMAS R. MARKILLIE, of Winchester, Ill.—*Improvement in Ploughs.*—Patent dated June 19, 1860.—This improvement consists in a mode of connecting the plough to the truck, by means of which, in passing round curves, &c., the plough is made to follow in the curve described by the truck, and by means of which, notwithstanding the truck may rise over little inequalities in the ground, stones, &c., the plough is still left unaffected and continues on without changing its relative depth of the furrow, when used in connection with levers, suitably arranged, for the purpose of raising or depressing the plough at will.

Claim.—The arrangement of the plough or ploughs, as connected to the truck, in combination with the levers G and L, the whole being constructed and operated in the manner and for the purposes described.

No. 28,760.—J. P. McLEAN and P. A. MORLEY, of New York, N. Y., assignors to P. A. MORLEY, aforesaid.—*Improved Egg Beater.*—Patent dated June 19, 1860.—This egg beater consists in the application and arrangement of the corrugated, twisted, or spiral arms, or beaters *b b¹ b² b³*, in combination with the revolving cylinder *e*, operated by means of the cog wheel *c c¹*, between the heads of the lid of the vessel, or by means of a flexible band of gutta percha or India rubber around the face of the hand wheel N, thereby operating the cylinder, whose head is analogous to the rough surface of a nutmeg grater, capable of taking hold of the rubber surface with force, and free from noise.

Claim.—The arrangement and use of corrugated or twisted beaters *b b¹ b² b³*, in combination with the cylinder *e*, and operated in the manner and for the purpose set forth, and shown in the drawings at Figs. 1 and 2.

No. 28,761.—JAMES MCGLENSEY, of Philadelphia, Pa.—*Improvement in Gas Burners.*—Patent dated June 19, 1860.—This invention consists in combination of the perforated cover D, the tube B, the jet A, and the holes C C, arranged as shown in the engravings.

Claim.—The arrangement of the cover D, provided with holes in the top to spread the flame, with the tube B, the jet A, and the holes C C, when used in the manner and for the purpose set forth.

No. 28,762.—RUFUS S. MERRILL, of Lynn, Mass.—*Improved Coal Oil Lamp.*—Patent dated June 19, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The adaptation, to the said wick tube, and arranged in a plane parallel with, and at a suitable distance from, its border, of one or more flanges, constructed substantially as described, to operate in the manner and for the purposes set forth.

No. 28,763.—FREDERICK I. MILLER, of Brooklyn, N. Y.—*Improved Cigar Rack for Hats.*—Patent dated June 19, 1860.—The body part *a* is formed of wire, or any other suitable material, any suitable number of clasps *b* being placed thereon to hold the cigars. The spring *c* on one end of the piece *a*, and a shoulder *d* on the other end of the same, are provided to fit and hold the rack in place.

The inventor says: I claim, first, the cigar hat rack, constructed and applied in substantially the manner described and shown.

Second. I claim the clasps *b*, constructed and operating as set forth, when applied to a hat rack for cigars, for the purposes and as specified.

No. 28,764.—HENRY MITCHELL, of Cincinnati, Ohio.—*Improvement in Sprinkling Attachments for Railroad Cars.*—Patent dated June 19, 1860.—This invention consists in the provision of a water-sprinkling apparatus for street or other railroad cars, by means of which said cars may sprinkle the roads they traverse.

Claim.—The combination of the tanks H H¹, sprinkling tubes I J, valve K, and brake gearing E F, arranged and operating substantially as and for the purposes set forth.

No. 28,765.—JACOB MOOMEY, of Clinton, Iowa.—*Improvement in Fenders for Docks, Wharves, &c.*—Patent dated June 19, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the employment or use of a frame or fender B, provided with rollers D, and suspended from a windlass or other fixture at the top of the dock, pier, or other structure, when said frame or fender is provided with India rubber rollers E, at its inner side, to operate substantially as and for the purpose set forth.

Second. The peculiar manner of attaching the India rubber rollers E to the inner side of the frame or fender B, namely: by means of the springs or elastic staples F, to operate as and for the purpose set forth.

Third. The connecting of the frame or fender B to the dock A, by means of the chains *k* and slides *j*, substantially as described.

No. 28,766.—WILLIAM A. MORSE and D. S. BEAN, of Boston, Mass.—*Improved Spring Bed Bottom*.—Patent dated June 19, 1860.—This invention relates to that class of bed bottoms in which wooden slats are used in combination with elastic attachments.

Claim.—The arrangement of the hooks C, elastics D, and metal frames F, as shown, for the purpose of attaching the slats E to the rails B of the bedstead.

No. 28,767.—BENJAMIN MORRISON, of Philadelphia, Pa.—*Improved Envelope*.—Patent dated June 19, 1860.—The claim and engravings explain the nature of this invention.

Claim.—An envelope provided with an opening or openings through which the usual postmark or marks may be imprinted or stamped, as heretofore, directly or exclusively upon the letter or document inclosed therein, substantially as set forth and described.

No. 28,768.—JEHIEL MUNSON, of Burlington, Vt.—*Improved Composition for Paste for Attaching the Coverings to Pianoforte Hammers*.—Patent dated June 19, 1860.—This paste is prepared by mixing six ounces of wheat flour, two ounces of isinglass, one ounce of gum arabic, and half an ounce of common glue. There are to be soaked in water long enough to effect a perfect solution of the materials, and then scalded.

The inventor says: I *claim*, first, the composition from the materials, and in the manner described, of an adhesive composition or paste.

Second. The application of such paste for the purpose of attaching to the whole face of the felt with which pianoforte hammers are usually covered, the leather by which they are protected from the action of the strings.

No. 28,769.—HERMAN G. C. PAULSEN, of New York, N. Y.—*Improvement in Clarifying Sugar*.—Patent dated June 19, 1860.—The inventor says: My invention consists in effecting a separation of the nitrogenous substances and the earthy salts from the crude sugar, by the application of dilute alcohol; for this purpose I combine alcohol with water in certain proportions, which, applied to the sugar, is heated to a certain temperature, effecting thereby the clarification and defecation of said sugar.

Claim.—The application of a temperature above the boiling point under atmospheric pressure of said combined liquors, as stated, to raw sugars or the concentrated juices of sugar-bearing plants, for the purpose of clarifying and defecating said raw sugars.

No. 28,770.—WALTER PECK, of Rockford, Ill.—*Improvement in Wind Mills*.—Patent dated June 19, 1860.—This invention consists in a certain combination of parts constituting the mechanism through which the effect of the governor is conveyed to the wheel; also in the use, in combination with the mill, of an atmospheric governor; and, further, in forming in the main driving pitman a universal coupling joint.

The inventor says: I *claim*, first, the combination of shoe N, pitman L, arm F, spider E, and spring *e*, or its equivalent; the whole arranged and operating as described, for the purpose set forth.

Second. I *claim*, in connection with the above-claimed combination of devices, the employment of an atmosperic governor S, substantially as and for the purpose described.

No. 28,771.—O. Z. PELTON, of Middletown, Conn.—*Improved Beer Pitcher*.—Patent dated June 19, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The beer pitcher having a movable froth partition, with a curved top and a lid provided with a packing ring; all as shown and described.

No. 28,772.—FREDERICK PLANT, of New York, N. Y.—*Improved Machine for Making Needles*.—Patent dated June 19, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the combination of the feeding and groove-stamping apparatus with the needle-holding tubes, substantially as and for the purposes specified.

I also *claim* the revolving needle tubes for holding the wire and relieving the same, as described.

I also claim the combination of a series of grinding apparatuses, with their adjustable blocks for pointing the needles, and polishing the same with a series of needle tubes or holders, as specified.

I also claim the apparatus for bending the barbs of the needles, as set forth.

I also claim the combination of a series of needle-holders, feed apparatuses, grinding and bending apparatuses, by which a perfect needle can be formed without manipulation in a single machine.

No. 28,773.—H. POISSONNIER, of New York, N. Y.—*Improved Composition for Silvering Mirrors*.—Patent dated June 19, 1860.—This invention consists in a certain composition of nitrate of silver, tartrate of potassa, and liquid ammonia, mixed together and diluted with a sufficient quantity of water, so that when the mixture is spread upon a glass plate it adheres to the same and forms a precipitate which produces the desired effect.

Claim.—The employment of tartrate of potassa, mixed with nitrate of silver and liquid ammonia about in the proportion specified, for the purpose set forth.

No. 28,774.—WILLIAM PRICE, of New York, N. Y.—*Improvement in Binding Guides for Sewing Machines*.—Patent dated June 19, 1860.—In using this machine the operator takes the desired width of binding and inserts it in the mouth C, and by means of the screw and slot *d* and screw *g* adjusts the hooks *c* and *f* to the central upper edge of the binding, and then adjusts the hook *a* by the screw and plate E, to control the under edge, allowing sufficient room for the binding to pass freely to the material; the binder is then secured to the machine by a screw passing through the slot B, and by cutting away, or, in most cases, replacing the ordinary presser foot, so as to get the binder in proper position to receive the edge of the material and binding for the successive stitches.

Claim.—The arrangement of the guide hook *c* and bar *b* on the bar D, as described, in combination with the hook guide *a*, wide mouth C, and supplementary guide *f*, the whole being constructed and operating substantially as and for the purposes set forth and described.

No. 28,775.—ISAAC RANDALL, 2d, of Claremont, N. H.—*Improvement in Apparatus for Drying Fruit*.—Patent dated June 19, 1860.—This apparatus consists of a drying box, and its contents made of timber or other suitable material, two and a half feet deep and seven and a half feet high, of which A A are the sides, B the back, C the top, with the aperture O O for the egress of heated air, D the bottom, and E E the doors.

Claim.—The fire box H and the hot air chamber G in combination with the drying box, as shown in Fig. 1 and above described, and shelves K K, &c., constructed and arranged substantially as set forth.

No. 28,776.—WILLIAM RANKIN, of Richmond, Va.—*Improvement in Cording Guides for Sewing Machines*.—Patent dated June 19, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A cording guide, composed of a single bent piece of metal, and having upon it a guide *e*, a groove *i*, and an eye *n*, and in close proximity to said eye a recess *r*, and also furnished with oblique nicks or indentations *o*, inclining in the direction of the feed of the cloth and so arranged as to come directly under the presser foot, and between it and the lower feed, substantially as and for the purpose set forth.

No. 28,777.—ALONZO J. ROGERS, of Stephentown, N. Y.—*Improvement in Seed Planters*. Patent dated June 19, 1860.—The cavities 1 2 3 are made of different sizes, to accommodate different sized seeds, and are placed at a sufficient distance from each other to allow proper space between the seeds sown; directly above the cylinder A is placed the hopper B held in position by the set screw E; the position of the hopper B may be adjusted, to bring it in a direct line with any particular row of cavities 1, by means of the screw E in conjunction with a slot in the cross piece.

Claim.—The arrangement of the axle H, wheels D D, roller G, plough F, cylinder A, and hopper B, arranged and operated as described and for the purposes set forth.

No. 28,778.—MAHLON B. RUPP, of McVeytown, Pa.—*Improvement in Seeding Machines*. Patent dated June 19, 1860.—The frame of the machine consists of the front bar A, rear bar B, connected by the side bars C C, which side bars are also connected by the cross bar D, in the rear of the front bar A, by the diagonal bar E and by a second cross bar F, to which the fore ends of the plough beams G G are hinged by means of the stands H H fastened to the bar F.

Claim.—The arrangement of the ploughs Q¹, upper guides *a*, lower guides R, adjustable board P, castor wheel *o*, and the seeding apparatus, the whole being constructed as described.

No. 28,779.—ANDRE SABATIER, of New York, N. Y.—*Improved Polish for Furniture*.—Patent dated June 19, 1860.—The component parts of this polish are as follows: Alcohol, one quart; gum benzoin, seven ounces; and linseed oil, six ounces.

Claim.—The polish, composed of gum benzoin, alcohol, and linseed oil, in about the proportions specified.

No. 28,780.—CHARLES H. SAYRE, of Utica, N. Y.—*Improvement in Cultivator Teeth*.—Patent dated June 19, 1860.—To prevent the upper end of the shank A from cutting the under side of the rail, a loose top plate D is passed over the cylindrical part of the shank and covers its upper edges, there being a tongue *i* formed on its under side, interposed between the two edges of the shank, to prevent their being compressed or forced together, while another is formed on the upper side *k*.

Claim.—The shank A, as constructed, in combination with the loose top plate D, for the purposes set forth.

No. 28,781.—WILLIAM F. SHAW, of Boston, Mass.—*Improved Apparatus for Broiling or Roasting by Gas*.—Patent dated June 19, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the arrangement of the steak holder, the broiling chamber, and the burner or burners.

Also, the arrangement of the two deflectors with the heating chamber and with respect to the burner or burners and the steak holder, when arranged as specified.

Also, the combination of the closed air chamber or space in the cover with the steak holder and the heating chamber, arranged as specified.

Also, the combination of the vertical side or cover with the steak holder and drip pan, said side or cover having a closed air chamber or space as specified and shown in the drawings.

No. 28,782.—DANIEL SHEETS, SAMUEL H. DUBOIS, and JOHN B. PRESSEY, of Suisun City, Cal.—*Improvement in Machines for Reaping and Mowing*.—Patent dated June 19, 1860.—This invention consists in the combination of the forward and backward reciprocating cutter with the stationary spear-shaped fingers or cutters, arranged and operating together.

Claim.—The combination of the forward and backward reciprocating cutter with the stationary spear-shaped fingers or cutters, arranged and operating together in the manner and for the purpose set forth.

No. 28,783.—A. B. SMITH, of Clinton, Pa.—*Improvement in Raking and Binding Apparatus for Harvesters*.—Patent dated June 19, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the mechanism described, or its equivalent, arranged to operate one or more compressing arms, independent of the binding arm, and work said compressing arm down on top and over the gavel, substantially as described.

And, in combination with one or more compressing arms, arranged to work down over the grain or gavel, as described, I claim the mechanism described, or its equivalent, for operating one or more compressing arms working up under the gavel, independent of the binding arm, substantially as described, so as to compress the gavel without the aid of the band or arm carrying the band.

I also claim the mechanism, or its equivalent, for making the compressing arms to work before or in advance of the arm that carries a band, to open a space between the grain or straw on the platform and the gavel for the end of the binding arm to come through, substantially as described.

I claim the application and arrangement of the devices, substantially such as are described, which operate the binding arm N with a positive motion in each direction, for the purpose specified.

I claim the hook P hollowed on its under side, operating in combination with the binding arm N carrying the knotted end of the band, as described.

No. 28,784.—J. P. SMITH, of Hummelstown, Pa.—*Improvement in Corn Shellers*.—Patent dated June 19, 1860.—In this invention a suitable frame A is provided in which are mounted the working parts of the machine, consisting of a shelling wheel B the periphery of which is of ogee form, in its axial section, that is, having a convex surface *r* of larger, and a concave surface S of smaller circumference, and of an ear holder C provided with a device for regulating the passage of the ears of corn down through it, and also to assist in shelling.

Claim.—The combination of the ogee-shaped shelling wheel B with the ear holder C provided with the adjustable teeth *p p*, the several parts constructed, arranged, and operating substantially in the manner and for the purpose set forth.

No. 28,785.—WILSON H. SMITH, of Birmingham, Conn.—*Improvement in Sewing Machines*.—Patent dated June 19, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Obtaining the lateral portion of such movement by means of a link W connecting the needle carrier S with the feed rock shaft, and acting in combination with a spring W¹, as described.

No. 28,786.—WILLIAM H. SMITH, of Newport, R. I.—*Improvement in Stoves*.—Patent dated June 19, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement of the opening *h*, partitions *c c*, and compartment F, in combination with the base A, compartment G, trunks H H¹, and annular passages I, as and for the purposes shown and described.

Second. Placing the oxygen supply tubes Q P P, between the inner and external cylinders A E, and consequently in contact with the heated products of combustion, for the purpose of admitting warm oxygen to the inflammable gases within the cylinder A, and thereby insure their perfect combustion.

No. 28,787.—JACOB STAMM and JOHN SHUBERT, of Sardinia, Ohio.—*Improvement in Spoke Machines*.—Patent dated June 19, 1860.—This invention consists in the use of a travelling pendulum frame, in connection with a swivel frame, to carry the cutters, the object of which is to secure to the cutters the proper lateral movement corresponding to the position and shape of the pattern, and at the same time a swiveling movement corresponding to the angular surface which may occur upon the pattern.

Claim.—The combination, with the pendulum frame P, of the swivel frame Q, in which the shaft of the cutter head is mounted—the whole being constructed and made to operate substantially as and for the purposes set forth.

No. 28,788.—JACOB S. STEINER, of St. Louis, Mo.—*Improvement in Sewing Machines*.—Patent dated June 19, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* imparting to the shuttle K a receding motion from the needle the moment after said needle has entered the cloth and before it has arrived at the lowest position, for the purpose of taking up the slack of the shuttle-thread after the latter has been turned over the edge of the cloth, to work a button-hole, substantially in the manner and for the purpose described.

I also claim so combining the hook Q with a needle and shuttle as that it may be readily coupled or uncoupled from the driving part of a sewing machine, by means substantially such as described, for the purpose of changing the machine from a button-hole to plain work sewing machine, and vice versa, substantially in the manner described.

No. 28,789.—AMBROSE S. STERLING, of Buffalo, N. Y.—*Improved Boiler for Cooking Stoves*.—Patent dated June 19, 1860.—This improvement relates to making the bottom of the boiler concave upwards, as shown at B, and in providing flues C which connect with the concave bottom and open into the fire-chamber and pass through the water to the outside of the boiler, for the purpose of increasing the heating surface and forming a passage for the flame through the interior of the boiler.

Claim.—The combination and arrangement of the concave bottom B, extension rim E, and saucer concave F, for the purposes and substantially as set forth.

No. 28,790.—ROBERT STOKES and DAVID JOHN JONES, of New York, N. Y.—*Improvement in Skirt Hoops*.—Patent dated June 19, 1860.—In order to adjust the circumference of the hoop, the slides D are drawn towards each other so as to be free from the pressure or spreading effect of the spreaders *c*, the members of the hoop can then be freely moved to and fro to shorten or lengthen the hoop; and when it has been thus adjusted to the required size, the slides are drawn back towards the ends of the members so as to jam over the inclined or spread ends of the hoops and secure the members of the hoops in their new relative position.

Claim.—The employment, in combination with the hoops A B and slides D D, in the manner substantially as shown and described, of spreaders *c*, for the purpose set forth.

No. 28,791.—CORNELIUS TEACHOUT, of Waterford, N. Y.—*Improved Drill Rest*.—Patent dated June 19, 1860.—The claim and engravings explain the nature of this invention.

Claim.—As an improved article of manufacture, a drill rest provided with a shank F, movable guide blocks C C, and adjusting screws D D—all constructed and arranged together substantially as described, for use in tool-holders of machinists' lathes.

No. 28,792.—ISAAC LERU VANSANT, of Red Lion, Del.—*Improvement in Adjustable Carriage Seats*.—Patent dated June 19, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the hinged, knuckled, and slotted legs with the levers, shoes, and ways described and shown by my drawings, as and for the purposes, of self-adjusting carriage seat composed wholly or in part of iron, or other suitable metal or wood, as before set forth.

No. 28,793.—HIPPOLYTE CHARLES VION, of Paris, France.—*Improved Method of Utilizing Atmospheric Electricity.*—Patent dated June 19, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the peculiar arrangement or means specified whereby I am enabled to use the positive electricity contained in the atmosphere and the negative electricity contained in the earth, and thus form an electric pile of considerable power and make the electricity therein contained available for industrial purposes, as set forth.

Second. The combination of an aerostat and vertical wire-work with a tube I for admitting gas into the aerostat, in the manner and for the purposes set forth.

No. 28,794.—H. NICHOLS WADSWORTH, of Washington, D. C.—*Improved Tooth Brush.* Patent dated June 19, 1860.—This invention consists of an improved brush for cleaning the molar teeth, so constructed that it can be conveniently run behind the molar teeth for the purpose of perfectly cleaning them.

Claim.—The construction of a brush with a wedge-shaped end, in combination with the obliquely set bristles—the whole arranged and operating as specified and for the purposes set forth.

No. 28,795.—CALEB C. WALWORTH, of Boston, Mass.—*Improved Steam Trap.*—Patent dated June 19, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the combination of the high pressure steam chamber *f*, reduced steam chamber *c*, valve *g*, and diaphragm *a*, or its equivalent, so arranged that the communication between these chambers is controlled by the direct action of high pressure steam upon one side of the valve, to open it, and of reduced steam upon the diaphragm and the other side of the valve, to close it.

Also, in combination with a reduced steam chamber, a siphon *m¹ m*, substantially as and for the purpose specified.

No. 28,796.—H. M. WALKER, of Watertown, Conn.—*Improvement in Connecting Shafts to Two-wheeled Vehicles.*—Patent dated June 19, 1860.—This invention consists in constructing the platform and shafts of the dray separately, and in connecting the shafts to the platform in a novel manner so that they may be turned at right angles to the platform when the horse is hitched thereto, and keyed or locked in this state when loading or unloading the dray; and when it is desired to start the horse, the shafts may be brought back to their original position, properly secured, and made to serve the purpose of stiff shafts.

Claim.—The manner essentially described of attaching the shafts to two-wheeled vehicles, whereby said shafts may be operated in the manner and for the purposes set forth.

No. 28,797.—A. F. WARREN, of Brooklyn, N. Y.—*Improved Pen Holder.*—Patent dated June 19, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Having the noses *a*, which form the socket for the pen, turned up or otherwise arranged, substantially as described, so that if the pen is inserted, the stick or pencil is allowed to pass clear through the tube.

No. 28,798.—E. T. WHEELER, of Camelton, Ind.—*Improved Shingle Machine.*—Patent dated June 19, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the combination, with a reciprocating carriage *B* and saw *C¹*, of the adjustable head blocks *E E E E*, their clamps *h h*, arranged and operating automatically, substantially as set forth, and the adjustable tables *J J*—all arranged in the manner and for the purposes described.

I also claim, in combination with the tables *J J*, and carriage *B*, when the machine is used for sawing shingles, of the pawl *m*, vibrating rod *N*, connecting rods *n n*, bars *J¹ J¹*, with their adjustable blocks *K K*, arranged and operating in the manner described and represented.

No. 28,799.—LOUIS WILHELM, of Buffalo, N. Y.—*Improvement in the Ventilation of Casks Containing Liquids.*—Patent dated June 19, 1860.—The nature of this invention consists in the arrangement of a ventilator in the top of the cask, and the connection of the same by means of a cord or chain to the top or faucet, so that when the plug of the faucet is turned to allow the liquor to escape from the cask, the ventilator will be opened and admit air in at the top of the cask, and when the plug is turned to stop the flow of the liquor, the ventilator will close itself by the action of a spring.

Claim.—The combination of the plug *b b*, valve *f*, rod *d*, spring *e*, cord *I*, and faucet *H L*—the said parts being constructed and arranged and operating in the manner and for the purposes set forth.

No. 28,800.—WILLIAM P. WOOD, of Washington, D. C.—*Improved Scroll Sawing Machine.* Patent dated June 19, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the horizontal pitman *K*, and sectional wheel *H*, or their or either of their equivalents, as arranged in combination with the hinged connecting strips *I* and *I*¹, connecting arms *J*, and straining block *c*, or their or either of their equivalents; the whole being constructed, arranged, and operated in the manner and for the purposes substantially as set forth.

Second. Combining the guide way *R* and buffer in one piece, so that they can be simultaneously adjusted to suit saw blades of different lengths, substantially as described.

Third. The adjustable slotted plates *p*, in combination with buffer foot *n*, having in its fork a plain friction roller, in the manner and for the purposes substantially as set forth.

No. 28,801.—L. B. WOOLFOLK, of Nashville, Tenn.—*Improvement in Steam Ploughs.*—Patent dated June 19, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement of the shaft *C*, the loose pinions *G G*, and the clutches *H H*, with the driving wheels *E E*, the whole being constructed and arranged substantially as herein described.

Second. The arrangement of the wheel *T*, having its axis out of the line of attachment to the frame *S*, in the journal at *U*, so as to answer and adjust itself to the movements of the driving wheels, substantially as set forth.

Third. The employment of the wheel *T*, having its shank *z*, turning loosely in the journal box at *W*, and provided with an oblong *d*, confined between the springs *a a*, in combination with the lever *x*, the rack bar *w*, and the segments *y y*, substantially as set forth.

Fourth. The arrangement of the friction wheels *m m*, the shafts *s s t t*, with the driving wheels *E E*, and shaft *C*, substantially as represented.

No. 28,802.—CLARK WRIGHT and WILLIAM PHELPS, of Sycamore, Ill.—*Improved Churn.* Patent dated June 19, 1860.—This invention consists in a rotary tub, and stationary spout and gathering basket combined.

Claim.—The combination of the rotary tub *F*, stationary spout *K*, and basket *H*, operating substantially as and for the purposes set forth.

No. 28,803.—THOMAS YATES, of Dubuque, Iowa.—*Improvement in Coffee Pots.*—Patent dated June 19, 1860.—This invention consists in the arrangement of an inverted bell shaped chamber, and a perforated cylinder, both covered by a strainer, in combination with a water vessel of ordinary construction, in such a manner that the essence of the coffee or other substance to be boiled is retained under the bell shaped chamber, and on cooling said essence is absorbed by the water pushing in and filling the chamber.

Claim.—The arrangement and combination of the inverted bell shaped chamber *H*, perforated cylinder *F*, strainer *G*, and vessel *A*, constructed and operating substantially in the manner and for the purpose set forth.

No. 28,804.—ENOCH S. YENTZNER, of Middletown, Pa.—*Improvement in Sewing Machines.* Patent dated June 19, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the combination and arrangement of the horizontally reciprocating shuttle *X*, vertically reciprocating needle *N*, feed pad *I*, disk *R*, having cam grooves *S U*, of the peculiar configuration described, in its opposite faces, eccentric *O*, lever *E*, lever *T T*¹, and lever *L*; the whole constructed and operating in the manner described, for the purpose of making the peculiar stitch represented in Figs. 7 and 8 of the drawings.

Second. A shuttle, for sewing machines, constructed with a sliding block *a b*, spiral spring *c*, and set screws *z*; the said parts being so arranged that a positive friction on the bobbin *Y*, is produced by the screw, and the action of the spring, when the screw is slackened, is to throw the block out of contact with the bobbin, substantially as and for the purposes set forth.

No. 28,805.—LYMAN BRIDGES, of Chicago, Ill., assignor to himself and N. M. SIMONDS, of said Chicago.—*Improved Heating Apparatus.*—Patent dated June 19, 1860.—When the stove becomes heated, the oil, as fast as it escapes through the perforated plate, is converted into gas and consumed without producing much smoke. The heat is regulated by adjusting the cock *K* to give a greater or less supply of oil.

The inventor says; I *claim* the combination of the oil reservoir *J*, with the oil chamber *H*, and cylinders *A D*, as and for the purpose shown and described.

I also claim the combination of the inclined or conical plate *F G*, arranged as shown, with the cylinders *A D*, in the manner and for the purpose shown and described.

I also claim the arrangement and combination, in the manner shown and described, of the cylinder M, and plates B N, with the cylinders A D, so that both surfaces of the combustion chamber will be protected by ascending columns of air, which will also become heated, all as specified.

No. 28,806.—ALBERT BROUGHTON, of Malone, N. Y., assignor to himself and ALEXANDER LINDSAY, of said Malone.—*Improvement in Stump Extractors*.—Patent dated June 19, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the mode of converting the hoisting gin into a cart or vehicle for the transportation of the machine and its apparatus, as shown in Fig. 6.

Second. The arrangement, connecting together, and combination of the hoisting gin and main lever, in the manner shown in Figs. 1 and 2, for the purposes stated.

Third. The method of attaching the main lever to the roots of the tree or stump, as shown in Figs. 1 and 2, and above described, together with the use of the main lever, as arranged, for the purpose stated.

Fourth. The arrangement, connecting together, and the combination of all the several parts of the machine, substantially in the manner shown in the annexed drawings and above described, for the purposes and uses in this specification above stated and set forth.

No. 28,807.—PHILETUS W. GATES and D. R. FRASER, of Chicago, Ill., assignors to themselves and THOMAS CHALMERS, of said Chicago.—*Improvement in Machines for Stamping Metal Quartz*.—Patent dated June 19, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim*, first, the combination of a toothed and collared rising and falling power bar D G, or its equivalent, with a combined plain and tooth lifting device H I, substantially as and for the purposes set forth.

Second. The manner, substantially as specified, of arranging the lifting device on its shaft, for the purposes set forth.

Third. The combination of two eccentric gears M, toothed and collared power bar D G, and the combined lifting device H I, substantially as and for the purposes set forth.

Fourth. The combination, with the inclined screens P P, of the mortars of the overhanging shields or guards N¹ N¹, substantially as and for the purposes set forth.

No. 28,808.—JOHN GREEN, of Brooklyn, N. Y., assignor to NATHAN THOMPSON, JR., of said Brooklyn.—*Improved Machine for Planing Warped Surfaces*.—Patent dated June 19, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of concave and convex rotating cutters, or either of them, mounted on a frame free to turn on an axis, with a stationary table or support for the plank to be reduced, the turning frame being provided with proper contrivances for rotating and holding it, and the combination constructed so as to produce warped surfaces, substantially in the manner described.

No. 28,809.—STEPHEN JACKSON, of Ossipee, N. H., assignor to DAVID L. HODSDON, of Somersworth, N. H.—*Improved Blind Slat Machine*.—Patent dated June 19, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, in combination with the awls and cutters, or mechanism for piercing the edges of a blind slat, and forming it with tenons on its ends, as specified, the slat hopper or rests X X, and platform V, and the impeller O, or mechanism for successively removing the slats therefrom and feeding them forwards between and away from the journal cutters.

I claim the self acting or spring cam stops Z Z, in combination with the impeller O, the platform V, and the inclined rails U U, the said cam stops being arranged and applied substantially in manner and to operate as specified.

I also claim the combination of inclined rails U U, with the platform V, and the awls or awl carrier; the object of such inclined rails being to cause an inclination out of the path of the awls of a slat while being expelled from the machine.

I also claim the combination of the end guides and slat holders T T, with the tenon cutting mechanism, the platform and spring pressers or slat supporting devices, as specified.

I also claim the combination of the rests p p, with the impeller O, in manner and for the purpose substantially as specified.

No. 28,810.—EBENEZER A. KIMBALL, of Boston, Mass., assignor to himself and ADRIAN L. MILLER, of said Boston.—*Improved Alarm Gauge for Steam Boilers*.—Patent dated June 19, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the arrangement and application of a slide valve, alarm whistle, valve seat, float lever and index pointer, in such manner that, by the movements of the slide valve, occasioned by the float lever, the indicator or index pointer shall be moved along its index or arc of divisions; and whenever the water of the boiler may have reached its lowest

safety level, the valve port of the steam whistle or the alarm apparatus shall be opened so as to enable the steam to pass into the whistle and sound an alarm.

I also claim providing the float stem with a steam passage extending longitudinally through it and opening into the boiler and dry steam chamber, as and for the purpose specified.

I also claim so applying to the index chamber the device for moving the indicator that any steam which may escape from the valve opening of such device may not enter the index chamber, so as to foul or condense on its glass.

No. 28,811.—JOHN LOW, of Clinton, Mass., assignor to NATHAN BRUCE, of Southboro', Mass.—*Improvement in Dulcimers*.—Patent dated June 19, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement, as described, of the central bridge 6, in relation to and in combination with the bridges 4 and 5, in the manner described, by which one part of each string is made to give a single chromatic interval of pitch higher than the other part, substantially as and for the purposes set forth.

No. 28,812.—GILBERT W. OLIVER, of New York, N. Y., assignor to HENRY PARKER and COLIN W. YALE, of said New York.—*Improvement in Preserving Meats*.—Patent dated June 19, 1860.—The claim explains the nature of this invention.

Claim.—The application or employment of heat to the specific purpose of curing and preserving meats, as corned provisions, in such a way and to such an extent as will effectually or sufficiently coagulate the albumen of the tissues and fluids, in combination with the subsequent application of heated brine or preservative fluid.

No. 28,813.—ALPHEUS D. ROLLINGS, of Green Point, N. Y., assignor to himself and H. J. HOWLAND, of New York, N. Y.—*Improved Steering Apparatus*.—Patent dated June 19, 1860.—By turning the hand wheel F, the gear wheels M and N work each to an equal extent in the respective segments *m* and *n*, and turn the rudder without any side strain on the rudder head, while the rudder, in rising and sinking, carries the boxes E E¹ and all the gearing with it.

The inventor says: I claim, first, the shaft and wheels G M N, reverse segments *m n*, guard R, rider T, and open jaws E E¹, arranged to operate together substantially as and for the purpose set forth.

Second. In steering gear, substantially as above described, the geared shafts G and H, and socket *f*, adapted to receive either G or H at pleasure, substantially as and for the purpose set forth.

Third. In steering gear, substantially as above described, the stop K, arranged to operate in the gear wheel *g*, substantially as described.

No. 28,814.—ISRAEL M. ROSE, of New York, N. Y., assignor to JOHN R. MORRELL, of Brooklyn, N. Y.—*Improvement in Sewing Machines*.—Patent dated June 19, 1860.—This invention consists in the combination of a revolving hook, bobbin, and reciprocating needle, with an eye-pointed needle that perforates the cloth in such a manner that the under thread is interlaced with the needle thread at the surface of the goods, and the loop of the needle thread being passed around the bobbin of the second thread, prevents the loop needle thread drawing up through the cloth.

Claim.—The revolving hook 1 carrying the bobbin 3, and lower needle *o*, in combination with the perforating eye-pointed needle *i*, substantially as specified, whereby the threads are concatenated, as set forth.

No. 28,815.—RHODA SOWLE, of Fall River, Mass., administratrix of the estate of DAVID SOWLE, deceased, late of Fall River, Mass.—*Improvement in Lozenge Machines*.—Patent dated June 19, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim, first, the arrangement of a plain smooth roller F, to operate in combination with the plunger E and cutters *c*, substantially in the manner and for the purpose described.

Second. I claim combining with each row of cutters C, on the rotary cylinder B, a separate clearer K, constructed and operating substantially in the manner and for the purpose described.

Third. The arrangement of the two endless aprons H and M, one at right angles to the other, to operate in combination with the cylinder of cutters B, and with the drum D, and with the clearers K, or their equivalents, substantially as and for the purpose set forth.

No. 28,816.—JOHN H. STEINER, of Philadelphia, Pa., assignor to himself and JAMES E. THOMSON, of Buffalo, N. Y.—*Improvement in Railroad Car Wheels*.—Patent dated June 19, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Constructing the cast iron part of the wheel with chambers or tapering pockets,

in combination with wedge-like blocks of wood B, having shoulders B¹ and the wrought iron band c shrunk thereon, for the purposes and substantially as described.

No. 28,817.—JOHN H. STEINER, of Philadelphia, Pa., assignor to himself and JAMES E. THOMSON, of Buffalo, N. Y.—*Improvement in Railroad Brakes*.—Patent dated June 19, 1860. When it is required to apply the brake, the wheel M, under the control of the engineer, is turned so as to lower the shoe to the rail. The spring C will relieve the brake from a too sudden action upon the rail, and will compensate for any unevenness in the rail, and prevent any sudden jar or wrenching of the locomotive.

The inventor says: I *claim*, first, the spring C, in combination with the shoe A and cam D, substantially as set forth.

Second. The combination and arrangement of the hook N N¹, and the flange N², with the cam D², cam shaft E, spring C, and shoe A, for the purposes and substantially as described.

No. 28,818.—GEORGE STORER, of New Britain, Conn., assignor to himself and the STANLEY RULE AND LEVEL COMPANY, of said New Britain.—*Improved Machine for Finishing Works in Wood and Metal*.—Patent dated June 19, 1860.—This invention consists in the construction of a proper frame work and gearing, in or upon which is arranged, in a suitable manner, a series of sliding plates, planed or trued up in a uniform shape and size, and connected at their ends by a properly formed joint, so made in their shape and distance from centre to centre, as to just fit into bearings made in the ends of projecting arms, or in the periphery of wheels, the centres of which bearings are made of a corresponding distance from centre to centre, so that the joints of the sliding plates will mesh into the bearings, as the said wheels and arms revolve, similar to the action or mesh of gearing.

Claim.—The combination of the sliding plates *j*, the milled or cutting plates *n*, guide ways *m*, with a proper holding jack *r*, upon the bed *p*, constructed and operating substantially in the manner as and for the purpose described.

No. 28,819.—DAVID H. THORP, of Chelsea, Mass., assignor to the BOSTON FAUCET COMPANY, of Boston, Mass.—*Improvement in Faucets*.—Patent dated June 19, 1860.—The claim and engravings explain the nature of this invention.

Claim.—In the basin faucet having a conical tubular elastic packing C made and applied to its valve, the stem, and case thereof, as described, the arrangement of the stop *x*, and its shoulder *y*, or chamber by which such shoulder is formed in the part D, with operating screws *i k f m*, and tubular elastic packing C applied to the valve stem *e* and its valve B, substantially as specified.

No. 28,820.—WILLIAM WRIGHT, of Philadelphia, Pa., assignor to himself and JOHN BRADY, of said Philadelphia.—*Improved Animal Trap*.—Patent dated June 19, 1860.—This invention consists in the general arrangement of the base of the trap, an upright, a spiked board hinged to the base, a spring, a retaining lever, and a trigger plate; also in a notched projection secured to the spiked board, and arranged in respect to the spring, so as to prevent the animal from escaping after it has been caught between the spiked board and the base.

The inventor says: I *claim*, first, the general arrangement of base A, the upright B, spiked board C, spring G, lever D, and trigger plate F.

Second. I claim the projection *m* on the spiked board C, when the notches of the said projection are arranged in respect to the spring, as and for the purpose set forth.

No. 28,821.—PETER Z. ALLEN, of KNOX, N. Y.—*Improved Washing Machine*.—Patent dated June 26, 1860.—This invention consists of two rubbers, so arranged that one shall hold the clothes in one direction while the other operates on them in a contrary direction.

Claim.—The combination and arrangement of the convex rubbers C C C, upright arms D D, slot *a*, cross bars E, bracket arms F, pivots *f*, cross bars J J J J, connecting rods K K, and shaft *m*, when used for the purposes specified.

No. 28,822.—W. H. ANGELL, of Clermont, Iowa.—*Improvement in Unloading Hay*.—Patent dated June 26, 1860.—This invention consists in the use of a carriage placed on suitable ways within the barn at its peak, said carriage having a tackle connected with it, and a catch or fastening, the above parts being used in connection with a detaching device.

Claim.—The employment or use of the carriage C fitted on the ways B B provided with a tackle frame F and hooks H H, and used in connection with the rope mechanism M and the hook separator formed of the bars L *d* and bevelled projections *e*, or their equivalent, all being arranged and applied substantially as and for the purposes set forth.

No. 28,823.—MOSES S. BEACH, of Brooklyn, N. Y.—*Improved Printing Press*.—Patent dated June 26, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, closing the fingers of printing cylinders by the combined operation of the coil spring G^1 , the finger crank H , and friction roller H^2 , and the cam J^2 , or their equivalents, constructed and operated substantially as described.

Second. Closing the fingers of printing cylinders by means of the pendulum switch cam L and the operating pin N , or their equivalents, constructed and operated substantially as described.

Third. Closing the fingers of printing cylinders by means of the cam K , and the combination of friction roller I^2 and pin I^1 , or their equivalents, constructed and operated substantially as described.

Fourth. Opening or throwing backwards the fingers of printing cylinders or paper rollers by means of the coil spring a^1 , and closing them by the combined operation of the finger crank c , the crank pin c^1 , and the cam e , or their equivalents, constructed and operated substantially as described.

Fifth. Depositing sheets on a board or table by means of the rollers $T T$, or their equivalents, having an axial combined with a planetary motion, constructed and operated substantially as described.

Sixth. The rollers T^2 used, in connection with the rollers $T T$, in drawing forward and depositing sheets, or their equivalents, constructed and operated substantially as described.

Seventh. The concave form of the fly board D , Fig. 1, as described.

Eighth. The deflecting points F , or their equivalents, used in connection with the rollers $T T$, in depositing the sheet, constructed and operated substantially as described.

No. 28,824.—LEVI A. BEARDSLEY, of South Edmeston, N. Y.—*Improved Machine for Removing Bark from Willows, &c.*—Patent dated June 26, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, a rubbing slab having its acting surface of undulating form, as described, the said surface being formed of yielding segments, the whole being constructed substantially as described and for the purpose specified.

Second. The rubbing slab H , having a flat, elastic, and yielding surface, acting in combination with another properly formed slab and a feeding device, acting substantially as specified.

Third. Receptacles for water, forming part of the rubbing slab, as described.

Fourth. Giving to the rubbing slabs, or one of them, a motion, at times and by means of the cams dd , or their equivalents, which shall separate the two slabs and prevent their action upon the twigs while the twigs are moved for the purpose of feeding.

Fifth. A yielding clamping surface in combination with another surface, the said surfaces acting in combination with a separate rubbing device when the said clamping surfaces act to feed the twigs, substantially in the manner described.

Sixth. The mode, substantially as specified, for presenting different portions of the twigs to the action of the rubbing surfaces, its characteristics being that the twigs are moved by the feeding device during the time when the pressure of the rubbing surfaces upon the twigs is relieved, and that the feeding device ceases to act upon the twigs at a time when the pressure of the rubbing surfaces is upon the twigs.

Seventh. In combination with a rubbing mechanism for loosening the bark and a feeding device, an automatic raking or scraping device, constructed substantially in the manner described and for the purpose specified.

No. 28,825.—CHARLES C. BIER, of New Orleans, La.—*Improved Iron Tie for Cotton Bales.*—Patent dated June 26, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The particular novel mode of making an iron tie, for the purpose of securely fastening cotton bales, or other baled goods, as described, using for the manufacture of the same any metal suitable for the purpose.

No. 28,826.—CALEB BOND, of Richmond, Ind.—*Improvement in Water Wheels.*—Patent dated June 26, 1860.—This invention consists in the employment and peculiar adaptation and arrangement of hinged auxiliary buckets by means of which the water wheel can be adjusted as required, so as to secure the best effect from any given quantity of water.

Claim.—In combination with the passages g , I claim the hinged auxiliary buckets h , the whole being constructed and arranged to operate, substantially in the manner as specified, for the purposes described.

No. 28,827.—N. W. BONNEY, of Victoria, Texas.—*Improved Bolt for Doors.*—Patent dated June 26, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of lever stop j , cam i , and spring b , with the two wings $m n$ of a door, when the same is so applied that the closing of two wings brings the bolt into effective action, and the opening of the wing which has the lock applied to it allows the bolt to automatically cease its action, as set forth.

No. 28,828.—E. W. BRETTELL, of Newark, N. J.—*Improved Lock.*—Patent dated June 26, 1860.—This invention consists in constructing and arranging the several parts of the machine

Claim.—The employment or use of the tumblers *b* placed within the tube *F*, which is fitted within the cylinder *E* attached to the lock case, in connection with the plate *I*, stationary or yielding, the tube *F* having the dog *J* attached, and all arranged substantially as and for the purpose set forth.

No. 28,829.—R. M. BROOKS, of Greenville, Ga.—*Improvement in Cultivators.*—Patent dated June 26, 1860.—This invention consists in constructing and arranging the different parts of the machine.

Claim.—The arrangement of the seed box *H*, as constructed, with the standard *B*, distributing cylinder *G* provided with pins or teeth *x x*, and with the slide *I* provided with an opening *S*, when the same are used substantially as and for the purpose specified.

No. 28,830.—W. W. BURSON, of Yates, Ill.—*Improvement in Grain Binders.*—Patent dated June 26, 1860.—This invention has reference to binding grain upon the platform of any reaping machine before it is thrown to the ground, and consists of a certain combination of devices.

The inventor says: I *claim* extending and contracting the fore arm *A* by the action of the rear portion of *A*¹ upon the cords *B* and *C*, substantially as set forth.

The combination of the hooks *Z P u* and the bent lever *S*, operating substantially as described.

The arrangement of hooks *P* and *u*, whereby the latter is passed through the loop, substantially as and for the purposes described.

The arrangement of lever *S* in combination with shield *h*, acting substantially as and for the purpose set forth.

The slotted hook *Z* in combination with hook *a*, substantially as described, for the purposes specified.

The hook *a* and receptacle *c*, arranged and operating together substantially as described and for the purposes set forth.

No. 28,831.—JOSHUA F. CAMERON, of Livingston County, Mo.—*Improvement in Cultivators.* Patent dated June 26, 1860.—This plough consists of a main helve *A* through main beam *B*, to which is attached the heel bar *C* and braces *D E*, so constructed that any form of share, right or left, can be fastened on the main helve by means of a screw through the socket into the helve upon which the share is fastened; and by unscrewing or moving the front brace and changing the hind bolt in the hind brace, the beam can be raised or lowered to any pitch; and by means of holes in the different helves the bar and braces and beam *B* can be hoisted or lowered at the will of the operator.

Claim.—The described arrangement and combination of the rotary coulters *Z Z*, beam *B*, bar *C*, helves *A F G H I K* and *L*, cross bars *M N*, and braces *D E O P Q R S T U V*, in the manner and for the purposes set forth.

No. 28,832.—JOHN CHAMPLIN, of East Middlebury, Vt.—*Improvement in Water Elevators.* Patent dated June 26, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the buckets *F*, one or more, attached to the pulleys *C C*¹ of shaft *B*, in connection with the tilting shoes *E*, through the medium of the links and rims *j i*, or their equivalents, and the pawls arranged relatively with the ratchet *a*, as and for the purpose set forth.

Second. The ball *I*, and box *H*, on shaft *G*, in connection with the pawls *b b*¹, attached to the inner side of the curb *A*, the shaft being connected to the shoes *E* through the medium of the links and arms *j i*, or their equivalents, and the pawls arranged relatively with the ratchet *a*, as and for the purpose set forth.

Third. The adjustable spout *L*, arranged in connection with the slide *M* and tilting shoes *E*, and adjusted respectively within and to the curb, substantially as and for the purpose set forth.

No. 28,833.—JAMES CHARLTON, of Allegheny, Pa.—*Improvement in Cultivators.*—Patent dated June 26, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the flanged bar *e*, bent so as to form the segment of a circle and furnished with slots *x* and *i*, the bar point or mould board and scraper being attached to said flanged bar, arranged, constructed, and operated as described, and for the purpose set forth.

No. 28,834.—E. D. CLARK, of Earlville, N. Y.—*Improvement in Mills.*—Patent dated June 26, 1860.—The claim and engravings explain the nature of this invention.

Claim.—So combining a fanning device with a mill for crushing and shelling corn as that by the movement of the shifter *N*, the contents of the hopper *G* may be discharged into mill *B*,

or through spout C; the parts composing said mill being arranged substantially as described, and for the purposes set forth.

No. 28,835.—JAMES M. COBB, of Jackson, Tenn.—*Improvement in Cotton Scrapers*.—Patent dated June 26, 1860.—This invention relates more particularly to the frame which supports the mould board, said frame being so connected with the beam as to be made adjustable thereon to set the point and share of the scraper, more to or from the plants that are to be cultivated.

Claim.—The construction and arrangement of the frame, sole, and mould board, when united in the manner and for the purposes represented and described.

No. 28,836.—JAMES M. COBB, of Jackson, Tenn.—*Improvement in Ploughs*.—Patent dated June 26, 1860.—This invention relates to the construction and arrangement of the mould board and its connected parts, the share and landside plate, and the subsoiler.

Claim.—The combination and arrangement of the mould board, standard, and sole with landside plate H and beam A, and with the subsoiler I, as represented, and for the purpose set forth.

No. 28,837.—CELADON L. DABOLL, of New London, Conn.—*Improvement in Fog Alarms*.—Patent dated June 26, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the general method, substantially as set forth, by which air, which has been mechanically condensed, shall be applied to the sounding of a trumpet or whistle for the purpose of giving marine signals by sound.

Second. The use of the cam C, when used for the purpose of communicating a series of signals more intelligible than mere independent sounds, substantially as set forth.

Third. The combination of the cam C, the stem D, and valve E, for the purpose of giving a variety of sounds of a trumpet or whistle, for the purposes and in the manner described.

Fourth. The trumpet T, in combination with the reservoir R, and connecting pipe L, when used for the purpose set forth.

No. 28,838.—WILLIAM A. CROWELL, of Salisbury, Conn.—*Improvement in Spring Balances*.—Patent dated June 26, 1860.—This invention consists in adjusting the index, or pointer, upon the rod by which the hook, or pan, is connected to the spring in lieu of adjusting both the point and the spring relatively to the graduated scale.

Claim.—Arranging the adjustable index finger I, relatively to the rod E and shoulders K, substantially in the manner and so as to secure the advantages set forth.

No. 28,839.—WILLIAM DIXON, of Chicago, Ill.—*Improvement in Loading Hay*.—Patent dated June 26, 1860.—The object of this invention is to rake hay from the ground and elevate it to a determined height and deposit it in a wagon, or other vehicle, which is to be drawn over the hay after it is cut and dried.

Claim.—The arrangement of the endless chains K, rake teeth J, guide pieces L, stationary rake P, apron R, and castor wheel S, as and for the purpose shown and described.

No. 28,840.—WILLIAM C. DRUM, of Belvernon, Pa.—*Improvement in Feed Water Heaters for Steam Boilers*.—Patent dated June 26, 1860.—This invention consists of a vessel of cylindrical, or other suitable form, having inclosed within it a smaller vessel, so arranged as to leave a space between them, above, below, and on all sides, such smaller vessel having tubes running through it and communicating at each end with the interior of the larger, but not with the interior of the smaller vessel, constituting a water space having an inlet from the feed pipe and an outlet to the boiler and a receptacle below it for sediment.

Claim.—The heater composed of the vessels A and B, the tubes C C, with inlet and outlet pipes D E F G, sediment collector H, and receiver L; the whole combined and arranged substantially as described.

No. 28,841.—JOSIAH P. FULLER, of New York, N. Y.—*Improved Garter*.—Patent dated June 26, 1860.—This invention consists in the application of a steel spring to the formation of a band for a garter, which shall encircle and clasp around the leg over the stocking in such a manner that it shall be securely held in place. The characteristic feature of said spring or garter consists in tempering it while in the coil in contradistinction to tempering it in the flat state.

Claim.—As a new article of manufacture, the garter, constructed substantially as described.

No. 28,842.—E. N. FOOTE, of New York, N. Y.—*Improved Watch Chain Hook*.—Patent dated June 26, 1860.—This invention consists in the employment of a jointed ring, or two elliptical bows, having a pointed tenon at the point where the two ends come together that

fits in a corresponding hole made in one end of the bows, in combination with a female screw socket that confines the jaws of the bows together.

Claim.—The watch hook, constructed as described and represented.

No. 28,843.—O. F. FITCH, of Morristown, Ind.—*Improvement in Cultivators.*—Patent dated June 26, 1860.—The object of this invention is to construct a hand plough for light ploughing only, and to construct it in such a way that a harrow may be conveniently combined with it, which will be supported, braced, and strengthened by the plough, and capable of being extended or contracted according to circumstances.

Claim.—The described combination and arrangement of braces and frames, arranged in the relations set forth, and made to serve the purposes described.

No. 28,844.—WILLIAM C. FISHER, of Charlestown, Mass.—*Improvement in Bolts for Store Shutters.*—Patent dated June 26, 1860.—This invention consists of an improved spring bolt, which secures itself when it is pushed into place.

Claim.—As a new article of manufacture, the described bolt for securing store window shutters, operating substantially as set forth.

No. 28,845.—J. P. FISHER, of Rochester, N. Y.—*Improvement in Iron Bridges.*—Patent dated June 26, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim, first, combining the posts and the sections A A and F, of the lower chord of the truss by means of the double dovetail lower portions *b* of the post, the dovetail grooves in the ends of the said sections, the shoulder *x*, and the screws *e*, on the posts, and the plates *i i*, and nuts *g g*, the whole applied and operating substantially as set forth.

Second. In combination with the sections A and C, posts B, saddles *j*, connected and secured together as described, I claim the transverse girders G, and the tension braces H I and J, applied and arranged relatively to each other and to the said sections and posts, substantially as specified.

Third. The tightening of the wire rope braces H H and I, or any other wire rope tension braces of a bridge, by means of screws and nuts *r s* and *t u*, constructed and applied substantially as described—that is to say, so that the screws tighten the braces by twisting their parts together and holding them tight, and serve to tighten them further by bearing in recesses in a rigid part of the structure, substantially as specified.

No. 28,846.—D. F. ELMER, of Haydenville, Mass.—*Improved Watch Key and Guard Bar.*—Patent dated June 26, 1860.—This invention consists in a novel mode of combining the outer movable sheath with the inner tube, at the end of which is the key, whereby the construction of the combined key and bar is rendered more simple and stronger.

Claim.—The combined watch key and guard bar, constructed as described, with a sheath having an L-shaped slot fitted to the key tube and to a pin or projection thereon, substantially as described.

No. 28,847.—DAVIS DUTCHER, of Blue Grass, Iowa.—*Improvement in Corn Planters.*—Patent dated June 26, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim, first, the combination of the seeding and marking apparatus, operating together in the manner and for the purpose substantially as described.

Second. I claim the combination of the ploughs and supporting and gauging wheels *f*, so that they may be self-yielding to pass over any intermediate obstacle and be raised up by the driver from his seat, in the manner and for the purpose mentioned.

Third. I claim, in combination with the rear supporting wheels and the front self-yielding wheels, the marking and seeding devices arranged between them, and a driver's seat behind, for the purpose of balancing the machine, and still allowing the front wheels to rise and fall with the ploughs, as represented.

No. 28,848.—DANIEL N. DUNZACK, of Salem, Mass.—*Improved Chisel for Opening Boxes.*—Patent dated June 26, 1860.—This invention consists of a chisel B, with a slot I and a notch R cut in its thin end to admit a nail; the chisel B also has a groove O cut near its thin end to admit a small oblique chisel T; the chisel T operates in the groove O by a fulcrum N; the fulcrum N is secured between two thin oblong plates of iron or steel L L; said plates vibrate freely on, and serve as a rest for, the chisel B.

Claim.—The arrangement and combination of the several parts, when arranged and combined as described, for the purposes set forth.

No. 28,849.—F. N. DU BOIS, of Chicago, Ill.—*Improvement in Machines for Crushing Quartz.*—Patent dated June 26, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, so constructing and arranging the stationary back of the hopper and the vibrating front of the hopper that the escape passage S shall extend on a curved line in rear or on one side of a line drawn vertically through the apex of the angle formed by the two inclined sides of the hopper, substantially as and for the purposes set forth.

Second. An adjustable stirrup *u*, in combination with eccentrics *e f* and the arms *g h* of two or more vibratory jaws *p p*, for the purpose of limiting the extent of the motion of these jaws, substantially as set forth.

No. 28,850.—JAMES W. GAINES, of Melrose, Texas.—*Improvement in Mill Stone Dress.*—Patent dated June 26, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Making each of the main grooves in five sections *a a b b*, *a h i e*, *j f g k*, *c h l d*, *m d n d*, in combination with the shoulders *b c*, *i j*, inclined planes *o e f*, *p m l*, in the manner and for the purpose described.

No. 28,851.—JAMES E. A. GIBBS, of Mill Point, Va.—*Improvement in Sewing Machines.*—Patent dated June 26, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, so constructing a rotating looper and a stationary thread guard or guide, and applying the same in combination with the needle of a sewing machine, as to effect the twisting of the loop and the passage of each loop twice through its predecessor, substantially as described, for the production of the stitch specified.

Second. The employment of a stationary thread guard or guide, in combination with a rotating looper, for the purpose of spreading the loops to facilitate the entrance of the needle thereinto, substantially as specified.

Third. The stationary guard M applied in combination with a rotating looper, substantially as described, to prevent the looper from entering the loop which is being drawn up towards the cloth.

No. 28,852.—J. J. GREENOUGH, of New York, N. Y.—*Improvement in Pegging Machines.*—Patent dated June 26, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* transferring the contact between the sole of the boot or shoe and the rest piece *e*, or its equivalent, to the block *d* or awl stock *a*, or their equivalent, while the lateral movement is made to space the distance between the pegs, substantially as and for the purposes set forth.

I also claim driving the stock *a* by the combined action of the cam *f*, or its equivalent, for raising the same, and the spring for forcing it down to drive the awl or peg.

I also claim the boot clamp described, consisting of a heel and toe rest and intermediate forceps or clamps, substantially as and for the purpose specified.

No. 28,853.—THOMAS GRUNDY, of Boston, Mass.—*Improvement in Water Closets.*—Patent dated June 26, 1860.—This improvement consists in forming in the pipe that supplies the basin an air tight chamber, in which plays up and down a piston that is raised by a cam, when the handle is raised so as to open communication between the supply pipe and the basin, and drops slowly by its own weight, so that the supply of water cannot suddenly be cut off from the basin when the handle drops or is pushed down.

Claim.—The arrangement of devices described, the same consisting of the piston valve *k*, playing up and down in the cylinder *j*, and operated substantially as and for the purpose specified.

No. 28,854.—DANIEL GUPTAIL, of Elgin, Ill.—*Improvement in Raking Attachments for Harvesters.*—Patent dated June 26, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the employment or use of lazy tongs I, with rake J attached, in connection with the bar H, with the rake or plate M attached; the lazy tongs and bar being operated by the revolving arm E, pin K, and slot G, substantially as described.

Second. The frame N, in combination with the lazy tongs I, for the purpose of preventing the grain that is being cut, while the rake is in operation or passing over the platform, interfering with the operation of the rake, as specified.

No. 28,855.—ELIAS J. HALE, of Foxcroft, Me.—*Improvement in Lamps.*—Patent dated June 26, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* so combining or arranging a tubular air guard D within or with

the cone or deflector C, and with respect to the wick tube, that air passing up through the cone or deflector C shall be caused to freely circulate not only against the sides and edges of the flame of the wick, when inflamed, but against the outer surfaces of the sides and ends of the air guard.

I also claim so combining an air guard with the cone or deflector as to be removable with and by it, with respect to the wick tube, as set forth.

No. 28,856.—JOHN HAMLYN, of Bellevue, Mich.—*Improvement in Stump Extractors*.—Patent dated June 26, 1860.—In using this invention the lifting apparatus is adjusted properly on one side of a stump, and the fulcrum or pedestal on the other; the lever L² is next placed in proper position, and a chain, which is linked to an adjustable clevis K, is fastened as snugly as possible to the stump, after which the machine is so worked as to remove the stump from its bed.

Claim.—The application and use of the described arrangement of toggle bars T T, disks G and H, rollers c c c, &c., rack bar E, and catch pins p¹ p², in combination with an auxiliary lever L², substantially in the manner and for the purposes described and set forth.

No. 28,857.—HENRY HARGER, of Delhi, Iowa.—*Improvement in Setting Type*.—Patent dated June 26, 1860.—This invention consists in the arrangement of machinery in connection with the type case by which the types are fed to the composing stick, and of an arrangement of levers and fingers in connection with the composing stick, by which the types may be taken from the case and set in line.

The inventor says: I *claim*, first, the follower C, with the arm c, in connection with the pawl E, and rod D, or their equivalents, substantially as described and for the purpose set forth.

Second. The finger G, or its equivalent, substantially as described and for the purpose set forth.

Third. The composing stick H, in connection with lever K, bent lever L, connecting rod M, spring N, follower S, finger P P, and bar I, substantially as described.

Fourth. The guides V V, or their equivalents, substantially as described and for the purpose set forth.

No. 28,858.—HENRY M. HARTSHORN, of Malden, Mass.—*Improved Carpet Stretcher*.—Patent dated June 26, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the tack holding cup with the carpet stretcher, composed of a toothed plate and provided with a handle, as specified.

No. 28,859.—JAMES HATHEN, of Philadelphia, Pa.—*Improved Carpenters' Square*.—Patent dated June 26, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The use of one or more adjusting clamps J, attached to either end of the square stock, and made to serve in conjunction with the pins C and C¹, for securing the blade to the stock, and setting the same in a proper position, substantially as described and represented.

No. 28,860.—HENRY L. HAYNES, of Keene, N. Y.—*Improved Coupling for Shafting*.—Patent dated June 26, 1860.—The shafts B B are so fitted to the hole E, in the coupling A, that the coupling can be slipped entirely into the shafts, which enables a single piece to be taken out of a line of shafting without disturbing the other parts of the line.

Claim.—In combination with the keys D D, and coupling A, the scarfs J J, in the ends of the shafts B B, constructed as described.

No. 28,861.—GEORGE J. HILL, of Buffalo, N. Y.—*Improved Dating Machine*.—Patent dated June 26, 1860.—This invention is particularly designed for dating railroad tickets, but may also be used in banks, post offices, and other places where it is desirable to stamp or print names and dates upon tickets, cards, &c.

Claim.—The relative arrangement of the type apron G, type D, and platen H, with the inking rollers E K K¹, and automatic lever M, for the purposes and substantially as described.

No. 28,862.—J. J. HOLWELL, of New York, N. Y.—*Improved Fire Escape*.—Patent dated June 26, 1860.—This invention consists in arranging the tormentors F, which serve to elevate and to steady the ladders, with wheels or rollers at their lower ends, and with suitable sockets to receive the ends of pointed rods attached to the truck in combination with a rope or ropes, extending over a windlass in such a manner that by turning the windlass the tormentors serve to assist in elevating the ladders, and that when elevated the truck, together with the ladders, can be easily drawn from place to place; and it consists also in combining with said tormentors adjustable cross braces in such a manner that the same are steadied when the ladders are elevated.

The inventor says: I *claim*, first, the arrangement and combination of the wheeled tormentors F, pointed rods *e*, windlass E, truck B, and ladder A, constructed and operating substantially in the manner and for the purpose specified.

Second. The arrangement of the adjustable cross brace *d*, in combination with the tormentors F, constructed and operating substantially as and for the purpose set forth.

No. 28,863.—J. W. HOUGHTLIN, of Du Quoin, Ill.—*Improvement in Bran Dusters*.—Patent dated June 26, 1860.—This invention consists in the use of a fan, revolving screen or bolt in connection with revolving beaters and gatherers arranged within a suitable case.

Claim.—The employment or use of the bolt or screen F, plates *f*, and gatherers *g*, placed within a case A, and arranged to rotate in reverse directions, when combined with the spiral wire or ledge G, feeders *h*, and scrapers *d*, substantially as and for the purpose set forth.

No. 28,864.—GEORGE C. HOWARD, of Philadelphia, Pa.—*Improved Printing Press*.—Patent dated June 26, 1860.—This invention consists in connecting the plate or table A, by suitable mechanism with the belt shifter rod B B, so that at the proper moment the machine will stop itself; also in connecting the shifter rod with treadles, or their equivalents, so that the press may be started in the right direction.

Claim.—The combination of the plate A, the sliding rod L, the shifter rod B B, and the treadles H H¹, or their equivalents; the whole being connected by levers, or their equivalents, and so arranged that the machine cannot be started in the wrong direction, substantially as described.

No. 28,865.—JOSEPH CHARLES HOWELLS, of Madison, Wis.—*Improved Nozzle for Fire Engines*.—Patent dated June 26, 1860.—The object of this invention is to render a nozzle instantly adjustable, thus enabling the person having control of the pipe to discharge such a sized stream of water as may be desirable under the circumstances.

Claim.—The arrangement and combination of the rotary collar C, cap F, the ears *b b*, the pins or screw heads *c c*, with the adjustable mouth pieces B B, substantially as and for the purposes set forth and described.

No. 28,866.—AUGUSTUS P. HUTCHINSON, of Pembroke, N. H.—*Improvement in Attaching Whiffletrees to Sleighs*.—Patent dated June 26, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* arranging the whiffletree so as to project beyond one of the thills, in the manner described.

I also claim the application of the whiffletree to the thill bar, by an adjustable slider, or its equivalent.

I also claim the arrangement or combination of the spring stops *c d*, with the thill bar and the adjustable slider applied thereto and made to support the whiffletree, substantially as specified.

No. 28,867.—WALTER H. JENIFER, of Baltimore, Md.—*Improved Military Saddle*.—Patent dated June 26, 1860.—H represents a flat English seat, A the curved pommel, B the curved cantle, C the valise, F the flaps, D the surcingle, and E E the slots through which the surcingle passes.

Claim.—The combination and arrangement of the flat English seat H, the curved cantle B, the pommel A, the curved valise C, the flaps F, surcingle D, slots E E; the whole constructed and used as specified.

No. 28,868.—THOMAS J. JOLLY, of Olean, Ind.—*Improvement in Loading Hay*.—Patent dated June 26, 1860.—A is a frame supported on a pair of ground wheels B, and provided with a tongue C, for attachment to the rear end of the wagon bed; D D¹ is an open work grid or cradle, whose lower portion is nearly semi-cylindrical and concentric with the axle of the wheels B, and whose upper portion D¹ inclines forward and upward at an angle of about forty-five degrees; E is a cylinder rigidly attached to the axle within the frame, and armed with spikes *e*.

Claim.—The reciprocating toothed rods H, constructed and operating in combination with gathering mechanism E F G, in manner substantially as and for the purposes set forth.

No. 28,869.—GEORGE JUENGST, of New York, N. Y.—*Improvement in Shuttles for Sewing Machines*.—Patent dated June 26, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The brush *b*, in combination with the centre *a*, spring *c*, and screw *d*, as specified, whereby the whole of the parts can be removed for changing the spring, and the position of the centre *a*, can be adjusted, as set forth.

No. 28,870.—THOMAS KINGHORN and ROBERT KINGHORN, of Morgan, Ohio.—*Improvement in Cultivators*.—Patent dated June 26, 1860.—A shows the central draft beam, the front end of which is curved up, as at A¹, and is supported at its front end by a castor wheel E, whose standard F passes up through the clevis G, and the end of the draft beam A; the clevis is fastened to the standard F by a set screw, whereby the end A can be sustained on the wheel E, at any desired height, while the clevis and wheel can freely turn to follow in the direction of the team, although the team turns abruptly.

Claim.—The combination of the adjustable side pieces B B, with their teeth H, and adjusting rear supports D D, with the central beam A, hooks e e, and castor wheel E, arranged operate in relation to each other, substantially as and for the purposes set forth.

No. 28,871.—KIMBALL P. KIDDER, of Burlington, Vt.—*Improvement in Bee Hives*.—Patent dated June 26, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The removable and reversible bee catcher or passage way g, shown in Fig. 4, provided with a series of pivotted pendant doors or slats R, arranged and applied to the bee hive in the manner and for the purposes specified.

No. 28,872.—GEORGE LAVALLY, JR., of Champlain, N. Y.—*Improvement in Coupling for Railroad Cars*.—Patent dated June 26, 1860.—In unshackling, the brakeman, instead of going between the cars, stands on the platform or top of the car, and by means of the cord raises the lever, thus drawing up and freeing the bolt.

Claim.—The application to rail car bunters of slots T V and L, a lever N, supported at the centre by a fulcrum G, and attached to the pintle A, a bar S, a spiral spring R, the steel spring C, and the cord or chain M, constructed and arranged substantially as described.

No. 28,873.—O. L. LAWSON, of New York, N. Y., assignor to the NEW YORK CAR AND STEAMBOAT GAS COMPANY.—*Improvement in Portable Gas Holders*.—Patent dated June 26, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The reservoir E, composed of one or more cylinders, or its equivalent, placed between the force pumps B and holders K, for the purpose of facilitating the filling of said holders, substantially as set forth.

No. 28,874.—JOHN LEE, of Bolivar, Ohio.—*Improvement in Post Hole Diggers*.—Patent dated June 26, 1860.—This digger is made either hollow or solid. The lower end is made square and hollow, with sharp cutting edges at the lower end, and of any required length; the opening I is from eighteen to thirty inches from the cutting edges, and is as wide as the inner side of the digger, and extends up high enough to allow the earth to escape readily from the digger.

The inventor says: I *claim*, first, the hollow self-discharging digger, constructed and operating as set forth.

Second. I claim the wheel A and levers B, in combination with the digger C, operating as described, and for the purposes set forth.

No. 28,875.—WILLIAM H. LETTERMAN, of Philadelphia, Pa.—*Improvement in Desulphurizing Ores and Coal*.—Patent dated June 26, 1860.—This invention consists of an improved process for desulphurizing coal.

Claim.—The described process of treating oil and coal with chemical ingredients and steam, substantially as set forth, for the purposes specified.

No. 28,876.—WILLIAM LEWIS and WILLIAM H. LEWIS, of New York, N. Y.—*Improvement in Photographic Baths*.—Patent dated June 26, 1860.—This invention relates to a peculiar manner of forming baths for the nitrate of silver and other chemicals, and for photographic plates.

Claim.—Securing the edges of the glasses d g in grooves in the frame a a b, in the manner and for the purposes specified.

No. 28,877.—AUSTIN LEYDEN, of Atlanta, Ga.—*Improvement in Sewing Machines*.—Patent dated June 26, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Giving the swivel hook the necessary movement upon the spindle n, which carries it around the spool-carrier bed N by means of two eccentrics r and s, attached to the hollow stem and working in eccentric ways t and u, surrounding the said bed N, substantially as described.

No. 28,878.—LEON LONDINSKY, of New York, N. Y.—*Improved Mode of Binding Cap Fronts*.—Patent dated June 26, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The binding of cap fronts with japanned, colored, or enamelled metal, by means of flexible tools, substantially as described, and for the purpose set forth.

No. 28,879.—D. W. M. LOWER, of Albia, Iowa.—*Improvement in Seeding Machines.*—Patent dated June 26, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the connecting of the wheels B B and roller C, by means of the cranks *a a b b* and rods E, when said wheels and roller have the pins *l l* and rib *c* attached respectively to them, as shown, and are used in connection with the seed distributors H, or their equivalents, substantially as and for the purpose specified.

Second. The attaching of the shares J, hoppers G, and seed-distributing devices to adjustable frames F, arranged as described, to admit of the varying of the depth of the furrows as circumstances may require.

No. 28,880.—WILLIAM McCORD, of Sing Sing, N. Y.—*Improved Fire Escape.*—Patent dated June 26, 1860.—The inclination of the ladder can be governed by the rope *t*, and the ladder can be turned on the swivel M in any desired direction, thus affording means of escape for persons in the upper stories, or on the top of buildings on fire.

The inventor says: I *claim*, first, the arrangement and combination of the rising and falling frames G H I, (more or less,) links F, braces *i*, and platform L, constructed and operating substantially as and for the purpose specified.

Second. Arranging the links F and braces *i*, with rounds, substantially as described, so that the same form the means to go up to and down from the platform L.

Third. The combination with the platform L of a ladder N and swivel M, constructed and operating substantially as and for the purpose specified.

Fourth. The arrangement of the derrick O and rope T, to operate in combination with the ladder N and swivel M, substantially as and for the purpose described.

No. 28,881.—ROBERT McCORMICK, of Greenville, Va.—*Improved Machine for Stoning Fruits.*—Patent dated June 26, 1860.—B B are revolving brushes for cleaning the pulp from the screws; D D are cog wheels of equal diameter, and of the same diameter of the screws; E and E are bands which drive the brushes; *i* is a screw check which acts in connection with the follower *h*, and regulates the distance between the screws; K K are band tighteners for the revolving brushes.

Claim.—The combination and arrangement of the right and left screws A A¹, the brushes B B¹, the cog wheels D D¹, the bands E E¹, the pulleys *f f*¹, the hopper H, the follower *h*, the screw check *i*, the gauge *a*, the band tighteners K K; all substantially as and for the purpose specified.

No. 28,882.—JOHN McCULLOCK, of San Francisco, Cal.—*Improved Process for Treating Ores of Gold, Silver, and Copper.*—Patent dated June 26, 1860.—The claim explains the nature of this invention.

Claim.—The mode of reducing and liberating the metals—gold, silver, and copper—from their ores, together or separately, by mixing with any one or more of the said ores, in a very finely powdered or comminuted state, and when intimately mixed with ground charcoal or other carbonaceous matters, a certain proportion of plastic material, as common brick clay, china clay, or any other natural or compounded materials, that will agglutinate only at temperatures under a white heat, forming the metalliferous and carbonaceous mixture so compounded with plastic material into masses, bricks, blocks, or cakes, and then submitting the whole to artificial heat, which is continued while the earthy frame work, which forms a porous matrix commanding a great extent of internal as well as external surface, holds and exposes the metallic ores or compounds; and also the carbonaceous matters to the decomposing action of atmospheric air, oxygen, carbon, and heat, in a kiln, clamp, oven, or furnace. The reduced metallic constituents may then be collected by pulverization, washing in water, and subsidence therefrom, by melting and fluxing, or by amalgamation, as may be most convenient.

No. 28,883.—JAMES W. McLEAN and A. GUMMER, of Indianapolis, Ind.—*Improvement in Lath Machines.*—Patent dated June 26, 1860.—This invention consists in using a spiral cam for propelling the knife which moves forward and back at an angle of about forty-five degrees. By the peculiar construction of this cam, the knife, after having made its cut, is brought back instantaneously by means of a spiral spring belt attached to the knife plate and the frame work, thus giving it the entire surface of the cam, and a gradual wedge motion to make the cut of the lath.

Claim.—The rack *d d*, the angular slot *g*, Fig. 2, the section of wheel *e e*, or their equivalents, in connection with the rod *k*, Fig. 1, the two supporters *l l*, and the set screw *m*, substantially as and for the purpose set forth.

No. 28,884.—DAVID M. MEFFORD, of Jeffersonville, Ind.—*Improvement in Corn Huskers.*—Patent dated June 26, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination of spiral beads and grooves on vertical

or inclined rollers adapted in the manner set forth, to act continuously during the descent of the ear, substantially as described.

Second. The use of teeth or serrations in the bead, substantially in the manner and for the purpose set forth.

No. 28,885.—GEORGE E. MILLS, of New York, N. Y.—*Improved Amalgamator*.—Patent dated June 26, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A series of floors inclined reversely one above another, in combination with the several dams and compartments to retain the minerals, as described and for the purposes specified.

No. 28,886.—T. S. MILLS, of Iberia, Ohio.—*Improvement in Corn Planters*.—Patent dated June 26, 1860.—The object of the invention is to obtain a corn planting machine of simple construction by which corn may be planted in check rows without previously forming the ground.

Claim.—The cam E, when formed of two parts *h i*, for operating the seed slide F and markers H, and fitted in the adjustable frame D, having the shares G attached by the rods *n* for the purpose of admitting of the connection or disengagement of the wheels *d g*, and the adjustment of the shares G, substantially as described.

No. 28,887.—GEORGE A. MITCHELL, of Turner, Me.—*Improved Machine for Cutting Blanks from Shoe Tips*.—Patent dated June 26, 1860.—This invention consists in so constructing a double die holder, and the die and follower, as to give a sheering stroke or cut, and in combining therewith a guide to gauge the sheet metal thereto, and a stamp, so arranged as to guide the plate and stamp and cut the blank for the tip all at one operation.

Claim.—The double die holder E and G, and cutting die H, in combination with cutter J, stamp S, and guide U, to cut and stamp the blank at one operation, essentially in the manner and for the purposes fully set forth and described.

No. 28,888.—GEORGE A. MITCHELL, of Turner, Me.—*Improved Machine for Swaging Shoe Tips*.—Patent dated June 26, 1860.—This invention consists of the die box, die plunger and guide, so arranged and operating towards each other, that flat sheet metal blanks, or other substances, are instantly formed into the required shape to conjoin with the toe of the boot or shoe, and constitute a protecting tip.

Claim.—The combination of the die G, guide K, die box or holder E, and follower J, arranged and operated in the specific manner described and for the specific purpose fully set forth and described.

No. 28,889.—WILLIAM P. MITCHELL, of Baltimore, Md.—*Improvement in Hemming Attachments for Sewing Machines*.—Patent dated June 26, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement and combination described of the toothed wheel C, and the non-metallic concave wheel D, of larger diameter, formed of India rubber, leather, or other equivalent flexible material, both wheels being attached to, and revolving on, the same axis *g*, as and for the purposes set forth.

No. 28,890.—STEPHEN A. MORGAN and CURTIS C. MORGAN, of Auburn, N. Y.—*Improvement in Harrows*.—Patent dated June 26, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A harrow composed of at least two hinged and separately adjustable segments A A, furnished with adjusting bars running across the frames, and so that they may be detachable and capable of use when so separated, as cultivators, by applying handles to the adjusting bar, substantially in the manner and for the purpose set forth.

No. 28,891.—LEVI MORRIS, of Woodbury, Ill.—*Improvement in Corn Planters*.—Patent dated June 26, 1860.—The corn planting mechanism consists of a box, in which the corn to be planted is placed, in the shape of an ordinary millers' hopper, except that the front and rear sides of it occupy a vertical position in respect to the main frame, and is placed on a line crosswise to the main frame, just in rear of the studs F.

Claim.—The combination of the double crank L with the pitman K, the rod R, the slide P, the levers J J, the hoes and handles *m* and *n*, and the mechanism connecting and regulating them, for the purposes and substantially as described.

No. 28,892.—JOHN A. NAYLOR, of Rahway, N. J.—*Improvement in Adjustable Carriage Seats*.—Patent dated June 26, 1860.—This invention consists in making an additional seat to a carriage, and arranging it in such a manner that when it is not needed for use, it may be

folded up and pushed back under the permanent seat of the carriage; and also in such a way that when in use it may be elevated above the seat to which it is attached to any height required.

Claim.—The jointed and branched bars C C, and the rod N, in combination with the slots or slides I, and the seats A and B, when constructed substantially in the manner described.

No. 28,893.—CÆSAR NEUMANN, of New York, N. Y.—*Improvement in Machines for Making Hoop Skirts.*—Patent dated June 26, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the twisting apparatus, constructed substantially in the manner and for the purposes set forth, and consisting of a spool holder and tension apparatus as described, and strand guides or head and cap, as described.

I also claim the head and cap i, as specified, however combined in the manufacture of hoop skirts.

I also claim the tension apparatus and flyer frame, constructed and applied as set forth, in the manufacture of skirts by machinery.

I also claim the guides g for guiding the springs or loops into place, in the manufacture of hoop skirts, however made, so that a spring can be inserted by one end and pushed around into place without being guided by hand into the curve—all as specified.

I also claim the employment of the elevating cord c and drum d, combined with the machinery for forming the spring skirts, as specified.

No. 28,894.—JOHN OLLIS, of Bloomington, Ill.—*Improvement in Automatic Rakes for Harvesters.*—Patent dated June 26, 1860.—This improvement consists in a new and improved mode of operating the rake by which the cut grain is swept off the platform to the ground in gavels.

Claim.—The mechanism, substantially as described, for operating the rake.

No. 28,895.—ANDREW OVEREND, of Philadelphia, Pa.—*Improved Machine for Wetting Paper.*—Patent dated June 26, 1860.—This invention consists substantially in the employment of a reciprocating frame, perforated water supply tubes, feed and receiving boards, or platforms, and a holding device for joint operation, to effect the desired end.

Claim.—The reciprocating carriage C combined with the perforated water tubes I I J J, the feed and receiving platforms V R E¹, and the paper holding and discharging device formed of the rod D¹, and plate C¹, or their equivalents, arranged for joint operation substantially as described.

No. 28,896.—BENJAMIN OWEN, of Dayton, Ohio.—*Improvement in Cotton Seed Planters.*—Patent dated June 26, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the cylinders D D with the slides C C, when said cylinders are provided with teeth and revolve in opposite directions to each other, and when the slides are provided with seed apertures and have an alternate reciprocating motion under the cylinders, substantially as and for the purpose specified.

No. 28,897.—NATHAN PARRISH, of Galesburgh, Ill., assignor to GEORGE B. PETERS, of the same place.—*Improvement in Stump Extractors.*—Patent dated June 26, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the rocking lever b with the frame a, the cords e and m, the tackle block d¹, and with the chain, or its equivalent, which passes around the stump or grub in such a manner that power may be exerted by both ends of the lever, substantially as specified.

No. 28,898.—JOHN W. PATTEN and GRIFFITH P. TERRY, of Albany, N. Y.—*Improved Fire Escape.*—Patent dated June 26, 1860.—This invention is as follows: A drum or reel, upon which the escape rope is wound, is secured to a shaft revolving in journals fixed in the frame of the machine, constructed of light wrought iron; upon one end of the shaft is secured a spur wheel which gears into a pinion on a short shaft projecting beyond the frame to receive a sheave pulley or crank; by turning this the drum or reel is made to revolve; the other end of the shaft carries a pinion which gears into a spur wheel on a short shaft; said shaft projects a sufficient distance to receive a spiral elastic spring, is wound around and firmly fixed to it at one end.

Claim.—The arrangement of the spring S and the check rope N, in their relation to the brakes K K¹ and to the drum or reel F, as set forth.

No. 28,899.—JAMES G. PAVYER, of St. Louis, Mo.—*Improved Machine for Scouring Type.*—Patent dated June 26, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the application of endless aprons, or their equivalents, to

stones, or their equivalents, substantially in the manner described, for the purposes specified.

Second. Connecting the upper and lower stones and aprons with each other by means of yielding connections, so as to allow the type to pass between them, and so that they will adjust themselves to the different thicknesses of type, substantially as described.

No. 28,900.—JOHN G. PERRY, of South Kingston, R. I.—*Improved Sausage Filler*.—Patent dated June 26, 1860.—The operation of this machine is as follows: Motion being given to the cylinder with one hand, by means of the crank H the meat is fed into the hopper E by the other, and is drawn into the chamber by the stud slips D; but, as it cannot go around with the cylinder, because it is set close to one side of the case, it is forced by the spiral position of the studs to pass along towards the other end of the chamber and out of the opening F through the mould into the cases.

Claim.—The combination of the cylinder B and stud slips D, substantially as described herein and for the purposes set forth.

No. 28,901.—LUDLOW PIERSON, of Jeffersonville, Ind.—*Improvement in Making Eave Troughs*.—Patent dated June 26, 1860.—This invention consists in the provision of a series of clamps, for the more perfect and expeditious soldering and crimping of metal eave troughs.

The inventor says: I *claim*, first, the combination of block A, rocker B, and jaw C c D, the whole being constructed and operating substantially as set forth.

Second. The crimping clamp, composed of the hinged blocks G G, jaw G², lever H, and staple I I¹.

Third. The final soldering clamp J K L M, constructed and operating as explained.

No. 28,902.—A. D. PERINTON, of Dover, N. H.—*Improved Hat Cushion*.—Patent dated June 26, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The elastic felted cushion C interposed between the sweat leather A and the crown of the hat, substantially as described, for the purpose specified.

No. 28,903.—THOMAS H. QUICK, of New York, N. Y.—*Improved Machine for Cutting Sugar*.—Patent dated June 26, 1860.—This invention is explained by the claim and engravings.

Claim.—The arrangement and combination of two pairs of movable cutting surfaces, having their cutting edges one at right angles to the other, and at such distances one from the other that, by the successive action of said cutting surfaces, the sugar is cut up in the desired shape, substantially as described.

No. 28,904.—J. J. REEVES, of Sulphur Springs, Texas.—*Improved Medical Compound*.—Patent dated June 26, 1860.—The following is the recipe for compounding this medicine: Take one pound of leptandra Virginica, pulverized, one pound of asclepias tuberosa, pulverized, one pound of the seeds of lobelia inflata, pulverized, one pound of ground African ginger, one fourth of a pound of capsicum or African cayenne pepper, one fourth of a pound of cinnamon bark, pulverized, one half a pound of cimicifuga or the root of black cohosh, pulverized; mix all thoroughly together, and put the mixture up in four ounce bottles and seal it air-tight.

Claim.—The medical compound described.

No. 28,905.—JOHN RIX and JOHN S. SHAW, of Springfield, Mo.—*Improvement in Rotary Engines*.—Patent dated June 26, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the two hollow, sliding abutments E E¹ and the slide valve K, the said abutments being provided with parts *d d*¹, as described, and applied within separate compartments of the box D, to which steam is admitted by the said valve alternately, and the whole operating as set forth.

No. 28,906.—CHARLES SELTMAN, of Washington, D. C.—*Improved Shutter Operator*.—Patent dated June 26, 1860.—The whole apparatus, exclusive of the upper part, is cast in three parts, the brass boxing F and the lower part of the hinge E making the first piece, the shank *a*, rack *c*, and tongue *k* the second, and the crank hinge E, grooved bar *h*, pinion D, and plate cog *d* making the third.

Claim.—The combination and arrangement of the shank A, notches *f f*¹, cog plate *d*, spring *i*, pinion D, rack *d*, wedge-shaped tongue *k*, correspondingly grooved bar *h*, crank hinges E E¹, and the metal boxing F, when used in the manner and for the purposes specified.

No. 28,907.—J. W. SHIPP and C. W. CRENSHAW, of La Grange, Tenn.—*Improvement in Ploughs*.—Patent dated June 26, 1860.—A is the bar, with the standards B and C for attachment to the beam and handles; D is the beam; E is the wing or mould board; F the double reversible point; G the heel or landside which is let into the bar A and fastened there by bolts or screws; H shows the handles, which are first driven into the rings *a* on the standard B, and are then fastened to the beam by screws or bolts.

Claim.—The arrangement of the handles H, standard B, ring *a*, notches *ll*, bar A, standard C, mould board E, heel G, and double point F, the whole operating substantially as set forth.

No. 28,908.—CHARLES W. SMITH, of Evans, N. Y.—*Improvement in Window Blinds*.—Patent dated June 26, 1860.—This invention relates to a new mode of constructing and operating blinds for windows, and consists, first, in attaching the slats of such blinds at each end to a series of jack levers, by means of which they are folded together at the top of the window, or extended downward, closing the same. Second. In weighting the said levers to facilitate the operation of raising them. Third. In so attaching the slats to the levers that they will be thrown open when the levers are but slightly raised.

Claim.—First, the described method of operating the blind slats *a a*, by means of jack levers.

Second. The described method of attaching them to the levers.

Third. Weighting said levers to assist in elevating the blinds.

No. 28,909.—HERVEY SLOAN, of Franklin, Ind.—*Improvement in Seed Planters*.—Patent dated June 26, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the arrangement of the seed boxes A A¹ A², which are provided with three slides connected together and to a pitman or driving rod *a*, by means of a cross head *d*, substantially as and for the purpose specified.

The arrangement of the seed boxes A A¹ and B B¹, in the relative positions seen, their seed slides being connected together by the bars *c c*, substantially as and for the purpose specified.

The combination of the gear frame F, provided with levers *m* and *n*, and chains or cords *p*, with the frame upon which the seed boxes are placed, when the same are arranged substantially as and for the purpose specified.

No. 28,910.—O. M. STILLMAN, of Stonington, Conn.—*Improvement in Air Engines*.—Patent dated June 26, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, compressing and working the air in the single cylinder A, by the single piston B, in combination with the valves, an air passage R *r*¹, E F F and M, or their equivalents, arranged and operating substantially in the manner specified.

Second. The combination of the induction valve R, with the stuffing box R¹, piston rod B¹, and head A¹ of the cylinder A, so that the friction of the stuffing box upon the piston rod aids and controls the motion of the valve, substantially as shown and described.

Third. Causing a circulation of air through an annular space between the plunger O and the interior of the piston or piston rod, for the purpose of cooling the latter, substantially as set forth.

Fourth. Cooling the exterior of the cylinder A, by alternately inducting and expelling air through an annular space X, substantially in the manner described.

No. 28,911.—O. M. STILLMAN, of Stonington, Conn.—*Improvement in Air Engines*.—Patent dated June 26, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, using a portion of the power of an engine to cool the air used in the same by blowing currents of air over the moistened surfaces of the refrigerating vessels, substantially in the manner set forth.

Second. The arrangement of the refrigerating reservoir G, and blowing vessel O, relatively to the cylinder A and piston B, substantially as set forth.

No. 28,912.—JOHN SWEENEY, of Chicago, Ill.—*Improved Tobacco Press*.—Patent dated June 26, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the worm wheel and screw E F, chains J, cross head L, guides B B, follower C, one or more, and base or box A, with the ratchet and lever H¹ I¹, or their equivalents, arranged for mutual action, as and for the purpose set forth.

No. 28,913.—WILLIAM A. SUDDITH and JOHN F. SUDDITH, of Charlestown, Va.—*Improvement in Cotton Seed Planters*.—Patent dated June 26, 1860.—This invention consists in laying off the ground in rows and planting the seed in hills, then covering the seed up and rolling the ground.

Claim.—The arrangement of the rocking beam C, arm *o*, piston D and Y, spring R, shaft G, with spiral spring and cavity B, constructed and operated as described, for the purpose specified.

No. 28,914.—JOSEPH SUTTER, of New York, N. Y.—*Improvement in Seeding Machines*.—Patent dated June 26, 1860.—This invention consists in arranging and constructing the several parts of the machine.

Claim.—The arrangement of the arms L, the mould boards N, the seed spouts F, the cylinder D, as constructed, and the cylinder G, provided with harrows *d*, when the same are connected together and to the frame C, in the manner and for the purpose specified.

No. 28,915.—ALVA B. TAYLOR, of Newark, N. J.—*Improved Printing Press*.—Patent dated June 26, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the combination of the endless rack of the type carriage with the cog wheel that imparts motion to it, by means of two pinions and a solid pinion shaft having boxes or bearings that adapt themselves to the different positions which the pinion shaft assumes in the operation of the printing press.

I also claim the combination of the griper shaft, an arm and stop, (for rocking it,) and a cam and pin, (which control its rocking,) substantially as set forth.

No. 28,916.—C. A. TAYLOR, of Chicago, Ill.—*Improved Bonnet Box*.—Patent dated June 26, 1860.—This invention consists in arranging in the bonnet box an adjustable stand with a suitable form to receive the crown of the bonnet, in combination with a spring pad, in such a manner that bonnets of different sizes can be secured between said form and spring pad and sent from place to place without injury.

Claim.—The arrangement of the sliding stand D, form E, and movable spring pad F, in combination with the box A, constructed and operated substantially in the manner and for the purpose set forth.

No. 28,917.—RICHARD TAYLOR and RENSSELAER SPRAGUE, of Prairie City, Ill.—*Improvement in Corn Planters*.—Patent dated June 26, 1860.—This invention consists in having the seed boxes and the shares attached to a sliding frame, which are fitted on inclined planes in the main frame of the machine.

The inventors say: We *claim* the attaching of the seed boxes F, and the furrow and covering shares *l* H, to sliding frames E, placed on inclined surfaces *b c c*, and having the seed slides G, of the boxes F, arranged in relation with the staples or tappets *i i*, on the axle *c*, substantially as and for the purpose set forth.

We further claim, in connection with the sliding frames E, having the seed boxes and shares attached, the lever K, provided with the notch *o*, and arranged relatively with the pin *p*, for the purpose, when necessary, of stopping the rotation of the axle C, as set forth.

No. 28,918.—JAMES THIERRY, of Detroit, Mich.—*Improvement for Regulating the Exhaust of Steam Engines*.—Patent dated June 26, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination of the exhaust nozzle or nozzles of locomotives or other steam blast employing engines with a steam balanced exhaust valve controlled by the variable pressure of the steam in the boiler, through the medium of an elastic siphon-shaped steam tube, or its equivalent, said combination producing a governor to regulate the generating of steam for said engines, substantially as described.

Second. The combination of said nozzle or nozzles with said balanced exhaust valve controlled by the engine man through the medium of a convenient hand gear, in substance and for the purpose as described.

No. 28,919.—JOHN T. THOMPSON, of Jackson, Tenn.—*Improvement in Ploughs*.—Patent dated June 26, 1860.—This invention relates to the construction of the plough and the manner of uniting the several parts thereof.

The inventor says: I *claim* the frame *c*, with its plough point *j*, and wings or mould boards D, when the whole is constructed, arranged, and united, as set forth and described.

No. 28,920.—FR. TOGGENBURGER, of Chicago, Ill.—*Improvement in Sewing Machines*.—Patent dated June 26, 1860.—This invention consists in the arrangement of a tube projecting from the cap of the shuttle, in combination with a suitable loop, or projection attached to the shield to keep the lower thread in the proper direction and prevent its turning.

Claim.—The arrangement of a tubular projection *v* on the cap P, in combination with a loop *w*, or its equivalent, on the shield Q, constructed and operating substantially as and for the purpose described.

No. 28,921.—ALBERT TRACY, of the United States Army.—*Improved Folding Furniture*.—Patent dated June 26, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, in the construction of articles of furniture, the combination

of the swinging straps or arms C, constructed as described, with either pair of legs, or their equivalents, substantially as set forth.

Second. I claim the fixed strap or arm C, constructed as described, and connected and operating with the legs, substantially as set forth.

No. 28,922.—GREGOR TRINKS, of Jersey City, N. J.—*Improved Window Curtain Slide*.—Patent dated June 26, 1860.—The object of this invention is to effect the release of a curtain and pulley slide, which has no other motion than a sliding one, without making further tension on the cord, and simply by pressing down the thumb piece of the spring catch.

Claim.—In connection with the slide of a sliding cord pulley of a window curtain fastening, the improved construction and arrangement of the spring latch and double rack, substantially as described, and substantially for the purposes set forth.

No. 28,923.—HENRY C. VELIE, of Poughkeepsie, N. Y.—*Improvement in Mills*.—Patent dated June 26, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Casting the arm J on the case of the mill, to support the journal of the shaft and allow room for the hopper around the shaft, between said arm and the case of the mill, substantially as described.

No. 28,924.—GEORGE WALKER, of Philadelphia, Pa.—*Improvement in Vapor Lamps*.—Patent dated June 26, 1860.—This invention relates to a lamp for burning volatile hydrocarbon, by first vaporizing or gasifying the same, the illuminating flame being fed by the vapor, and the invention being applicable to ordinary fluid lamps.

The inventor says: I *claim*, first, the combination of the external shell or tube G with the wick or packing tube F, and heater tube I, provided with the heater J and plates c c, for the purpose set forth.

Second. The connecting of the described vapor burning apparatus to the body of a lamp by means of a tube D, in the manner substantially as and for the purpose set forth.

No. 28,925.—ALONZO WARREN and E. DAMON, JR., of Boston, Mass.—*Improvement in Dynamometers*.—Patent dated June 26, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Combining the index g with the two pulleys C D by means of a spring pawl f, slide I, arc-formed ratchet bar H, spring l, and a socket j, or other suitable projection from an arm E, the whole applied and operating substantially as specified.

No. 28,926.—DAVID WARREN, of Gettysburgh, Pa.—*Improvement in Seed Planters*.—Patent dated June 26, 1860.—To the bar F is secured an arm H, and to the arm H is secured an arm a; when the bar F partially revolves backward and forward, the arm a rises and falls; as said arm falls, it passes through an opening in the seed slide which contains the seed.

Claim.—The arrangement of the turning bar F, the arms H and a, the slide d, rod c, and stirrer e, substantially in the manner and for the purpose fully set forth.

No. 28,927.—GEORGE WHEELER, of New York, N. Y.—*Improved Boot Jack*.—Patent dated June 26, 1860.—The claim and engraving show the nature of this improvement.

Claim.—The new article of manufacture described, consisting of the forked base piece a and the detachable inclined standards b b, with the swelled pins 3 3, arranged in the manner and so as to combine the advantages set forth.

No. 28,928.—WILLIAM WICKERSHAM, of Boston, Mass.—*Improved Nail Cutting Machine*.—Patent dated June 26, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the described mechanism in nail cutting machines for shifting or moving laterally the sheet of metal or material to be cut into nails the distance of the length of two nails, or more if desired, for each series of nails cut from said sheet, substantially as described.

Second. I claim feeding the material to be cut into nails far enough towards the cutters for the width of a nail, while it is moving laterally, substantially as described.

No. 28,929.—JOHN M. WILLIAMS, of Greenville, Ga.—*Improvement in Cultivators*.—Patent dated June 26, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the beam A, the two collateral beams B B, the graduated bars a a, the handles M M, the supports F F, and the bar D, when said bar is secured to the main beam and rests upon the collateral beams, and when the several beams are provided with vertical and horizontal mortises for receiving the bars and shanks, as is fully set forth, and for the purpose specified.

No. 28,930.—R. S. WILLIAMS, of Bairdstown, Ga.—*Improvement in Ploughs*.—Patent dated June 26, 1860.—The claim and engravings explain the nature this invention.

The inventor says: I *claim* the casting of the foot D with a socket E and pockets *d*, substantially as shown, to receive the beam A and the lower ends of the handles C C, substantially as described.

I further claim, in connection with the sockets E and pockets *d d*, the base or cross piece B and taper beam A, the former being attached to the beam and handles, as described.

No. 28,931.—THOMAS WILSON, of Winterset, Iowa.—*Improvement in Seeding Machines*.—Patent dated June 26, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of frame C, set forth, in combination with the lever G, toggle levers *k k*, and clutching devices *e e g g*, as set forth, whereby the dropping of the seed may be stopped and the ploughs raised from the ground at the same time.

No. 28,932.—E. M. WOODWARD and JAMES E. WOODWARD, of Philadelphia, Pa.—*Improvement in Railroad Station Indicators*.—Patent dated June 26, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The application of the hand A to an ordinary clock, used in combination with a dial having the various points along the route marked upon it, the whole being so arranged as to show whether the car is in advance of, or behind time at any point, substantially as described.

No. 28,933.—L. B. WOOLFOLK, of Nashville, Tenn.—*Improvement in Steam Ploughs*.—Patent dated June 26, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement of the cylinder S provided with bevel wheel R having the shaft C passed through it eccentrically, shaft I, springs *g g*, bevel wheels *f f*, sleeves *i*, pinion G, rim F, wheels E, and ploughs W, the whole being constructed in the manner and for the purpose described.

Second. I also claim, in combination with the above, the cylinders S S², sleeve *u*, bevel wheel R, and shaft C, as described.

No. 28,934.—WILLIAM WORKMAN, of Ripon, Wis.—*Improvement in Seeding Machines*.—Patent dated June 26, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the principal seed box C and supplemental seed boxes F, the latter being provided with inclined planes *h h* and wheels H and fitted in the trough D having the inclined bottom or scattering board E, as and for the purpose set forth.

No. 28,935.—GEORGE C. WRIGHT, of Le Roy, Ohio.—*Improvement in Cutting and Coring Apples*.—Patent dated June 26, 1860.—This invention consists in the arrangement of the machine.

Claim.—The arrangement of the slide E, cross head E, treadle K, spring L, and the cutting and coring knives *a b*, the several parts being constructed and combined for operation in the manner described, for the purpose specified.

No. 28,936.—ELIJAH YOUNG, of Fayetteville, Mo.—*Improvement in Seed Planters*.—Patent dated June 26, 1860.—When this machine is used for planting corn, the corn is put into the box E, whence it is taken by the tubes *a*, one kernel at a time, and deposited in the tube D through which it falls to the ground in the rear end of the ploughs.

Claim.—The use of the ploughs B in combination with tubes D and C C¹, and the boxes E F, and the wheels I and H, for the purpose specified.

No. 28,937.—HENRY M. ZIMMERMAN, of Washington, D. C.—*Improved Hinge*.—Patent dated June 26, 1860.—This invention consists in making a butt hinge capable of being used either as a right or left hand hinge, by placing one leaf above the other on a pin or spindle, and so constructing it, that only one half the quantity of metal usually employed is required.

Claim.—As a new and improved article of manufacture, a butt hinge, constructed as specified, for the purposes set forth.

No. 28,938.—DANIEL C. COLBY, of Newport, N. H., assignor to himself and JAMES P. UPHAM, of Claremont, N. H.—*Improvement in Harrows*.—Patent dated June 26, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement of the toothed rollers B B, (and more than two if need be,) at a greater or less angle with the line of draft, so that the teeth of the rollers shall cut the soil diagonally to the lines made by the stationary teeth *a a*, &c., in the frame of the harrow.

Second. The frame of the harrow, composed of the side pieces A A and A¹ A¹, the cross braces C and D, and the connecting bar E, arranged as described, so that the angle of the rollers B B with the line of draft and the width of the harrow may be raised when desired,

thereby throwing the lines described by the two rear permanent teeth *a a* in the side pieces *A¹ A¹* outside or inside (as the case may be) of the lines described by the two permanent teeth *a a* in the side pieces *A A*.

No. 28,939.—SOLOMON GODFREY, LOREN BARNES, HENRY BLISH, and SOLOMON S. SMITH, of North Fairfield, Ohio.—*Improvement in Stills*.—Patent dated June 26, 1860.—This invention consists in the combination of three or more chambers of a still, with bent tubes, radiating perforated tubes, and straight tubes, arranged in relation to each other; also in the combination of the same with the heater and doubler.

The inventors say: We *claim*, first, the combination of three or more chambers of a still with bent tubes *I G*, radiating perforated tubes *O*, and straight tubes *K L*, when arranged in relation to each other, substantially in the manner and for the purposes set forth.

Second. The combination of the above with the heater and doubler, in the manner and for the purpose set forth.

No. 28,940.—JOSEPH OTTNER, of New Britain, Conn., assignor to P. and F. CORBIN, of the same place.—*Improved Lifting Handles*.—Patent dated June 26, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The raised socket *e* having parallel slits *f* starting from the underside or edge of the sockets, and extending upward to the centre (or nearly so) thereof, so as to hold the handle in a proper lifting position, with the double pivotted shanks *h*, made to correspond to the chamber of the sockets so as to hold it (the handle) in place, as and for the purpose described.

No. 28,941.—SAMUEL S. SHERWOOD, of New York, N. Y., assignor to himself and ALEXANDER DOUGLAS, of the same place.—*Improvement in Skeleton Skirts*.—Patent dated June 26, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the device described for securing the braids or tapes from slipping laterally upon the hoops, by sewing the braid or tape through the covering of the hoop, with the device described for securing the hoops from slipping upon the tapes or braids which form a vertical support, by returning the braid or tape over the hoop, and sewing it through itself, substantially as set forth.

No. 28,942.—T. C. SIMONTON, of Paterson, N. J., assignor to DE GRASSE B. FOWLER, of the same place.—*Improvement in Filters*.—Patent dated June 26, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The placing of the tube *D* and the plates *B B*, containing the filtering mediums *C*, secured as described in the case *A*, as shown, in connection with the pipes *E F G J*, provided with the cocks *H I K* communicating with the case, and arranged relatively with the plates or the compartments formed thereby, to operate as and for the purpose set forth.

No. 28,943.—JAMES L. SMITH, of Neoga, Ill., assignor to himself and JAMES Q. SLOAN, of the same place.—*Improvement in Corn Planters*.—Patent dated June 26, 1860.—The peculiar arrangement of parts in combination with each other, is what the nature of this improvement consists in.

Claim.—The arrangement of the seed boxes 8, 9, slide 10, crank 11, lever 12, 13, operating as described, for the purpose specified.

No. 28,944.—ARTHUR W. SWEENEY, of Washington, D. C., assignor to himself and CHARLES N. TYLER, of the same place.—*Improvement in Hinges*.—Patent dated June 26, 1860.—This invention consists of a peculiar arrangement of the latch and the cam or catch for self-fastening hinges for window blinds.

Claim.—The described hinge as a new article of manufacture, the cam, latch, and catch being constructed and arranged substantially in the manner and for the purposes set forth.

No. 28,945.—JOSIAH TURNER and THOMAS P. SMITH, of Sunapee, N. H., assignors to themselves and EDMUND BURKE, of Newport, N. H.—*Improvement in Cultivator Teeth*.—Patent dated June 26, 1860.—*A* shows the coulter or section of the tooth which penetrates and breaks the soil; the cutting or breaking edge of which should be constructed in the form of an angle more or less acute, but, in order to work well, should not exceed ninety degrees. *E* is a recess in the rear of the coulter.

The inventors say: We *claim*, first, the coulter *A*, with the indentation or recess *E*, constructed substantially as described.

Second. The coulter *A*, in combination with the concave wing *C*, with the curved point *G*, constructed and operated substantially as described.

No. 28,946.—JOSHUA TURNER, of Cambridgeport, Mass., assignor to himself and FRANCIS GUILD, of Dedham, Mass.—*Improvement in Plane-Iron Sharpeners*.—Patent dated June 26, 1860.—This machine will answer for sharpening gouges and other tools used by turners. A is a whetstone supported by a stand or table B; S is a wooden socket resting in or on the table. The table has two parallel rails C C for supporting and guiding a carriage D.

The inventor says: I *claim* the combination and arrangement of the separate cutter carrier and its carriage with the whetstone supporter, with parallel ways or equivalent means of guiding the carriage, the whole being to operate together substantially as and for the purpose specified.

I also claim the arrangement of ball bearings on opposite sides of the cutter carrier, and to operate with a socket of the carriage, as specified.

I also claim making the socket or step adjustable vertically for the purpose explained.

I also claim the combination and arrangement of an adjustable stop, with the table, the cutter carrier, and its carriage applied to the table, and with reference to the whetstone or its supporter, as specified.

No. 28,947.—MILTON D. WHIPPLE, of Charlestown, Mass., assignor to the WHIPPLE FILE COMPANY.—*Improvement in the Manufacture of Files*.—Patent dated June 26, 1860.—The claim and engravings explain the nature of this invention.

Claim.—As a new article of manufacture, a file having its teeth sheared off smooth, and of a uniform height, substantially as specified.

No. 28,948.—JOSEPH A. SMITH, of Fond du Lac, Wis., and ISAAC ORVIS, of Oakfield, Wis., administrator of the estate of L. M. ORVIS, deceased.—*Improved Printing Press*.—Patent dated June 26, 1860.—The claim and engravings explain the nature of this invention.

Claim. First, the arrangement of the form beds I J and stationary platen K, substantially as shown, so that the impression may be given simultaneously and by the same application of power, and the under side of the upper form be made to serve as a platen for the lower one.

Second. The arrangement of the form beds I J and platen K, with the roll of paper O, substantially as shown, and operated respectively and intermittingly, so that the paper may be printed from a continuous sheet and at both sides during a single passage through the press.

Third. The endless wet blanket N arranged to pass underneath the platen K, and to be moved simultaneously with the paper O, for the purpose of moistening the same during the pressure which causes the paper to receive the impression from the forms.

Fourth. The ink rollers $k k k^1 k^1$, operated through the medium of the bars $h i$, arms g , rockshaft G, the slotted curved bar F, and wrist pin e , on wheel d , when said rollers are used in connection with the form beds I J, and platen K, as set forth.

Fifth. The combination of the form beds I J, platen K, endless blanket N, ink rollers $k k k^1 k^1$, paper roll O, rotary knife R, and stationary bar S, all arranged for joint operation as and for the purpose set forth.

No. 28,949.—CALVIN ADAMS, of Pittsburgh, Pa.—*Improvement in Door Locks*.—Patent dated July 3, 1860.—This invention consists in the form of the latch bolt, and keeper of the lock, so that the lock may be used as a reversible or right and left hand mortise lock, as well as for a rim lock, the interior of the lock being of any well known construction.

Claim.—In combination with a mortise or rim lock, a bolt having the inclines $a a$, and vertical part b on its end, for the purpose of adapting said locks to either a right hand or a left hand door, substantially as described.

No. 28,950.—STEPHEN ALBRO, of Buffalo, N. Y.—*Improved Bed Cords*.—Patent dated July 3, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The formation of common rope cords with detached loops or reaches, to be used as bed cords, in combination with the metallic swivels a and catches d and e , by which they are attached to bedsteads, substantially as described.

No. 28,951.—ETHAN ALLEN, of Worcester, Mass.—*Improvement in Revolving Fire Arms*.—Patent dated July 3, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Providing the recoil plate of revolving fire arms with a projection in the form of an inclined plane, so that the cylinder will be free to revolve at the first minute movement of the hammer, substantially in the manner and for the purpose set forth and described.

No. 28,952.—ITHIEL S. ARNOLD, of South Milan, Ind.—*Improvement in Hay Presses*.—Patent dated July 3, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the combination with the grooved pressing chamber and follower, of the slatted top or side door O, end door M, and notched slide N, substantially as

specified, or the equivalents of these devices, whereby the bale may be hooped while in the press without opening the press for the purpose.

Also combining, with the follower, mechanism for raising the ends of the hoops in the press without opening the latter, to secure the action of the follower upon the hoops, substantially as specified.

Likewise the arrangement of the doors F O and M, essentially as shown and described.

And lastly, the combination with the follower of the clutch *a*, conical pulley J, rope or chain I, and sweep L, substantially as specified and for the purposes set forth.

No. 28,953.—ALEXANDER ASBOTH, of New York, N. Y.—*Improvement in Composition for Roofing and Cement*.—Patent dated July 3, 1860.—This invention consists in connecting by a mixture of litharge and linseed oil, gravel or broken stone mixed with pounded brick in such a solid manner that the mixture, when dry, attains the consistency of stone.

Claim.—The mode described of making a concrete by the mixture of gravel, powdered brick, oil, and litharge.

No. 28,954.—WILLIAM AUSTIN, of Philadelphia, Pa.—*Improvement in Attaching Water Pipes to Buildings*.—Patent dated July 3, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The described method of attaching water pipes to buildings whereby any one joint may be removed or replaced without either injuring the wall or disturbing the remainder of the joints, the whole being constructed and operating substantially as set forth.

No. 28,955.—CHARLES H. BAKER, of Red Wing, Minn.—*Improvement in Steam Land Carriages*.—Patent dated July 3, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement of means set forth for connecting the engine frame to the frame or body of the carriage.

Second. The arrangement of means, as set forth, for allowing the inside wheel to accommodate itself to the movements of the carriage in turning.

No. 28,956.—WILLIAM R. BENNETT and CHARLES STORER, of Boston, Mass.—*Improved Mode of Polishing Varnish*.—Patent dated July 3, 1860.—The ware is first prepared for receiving the varnish in any of the usual modes; when prepared, the varnish is put on in the usual manner and allowed to dry; when well dried, pumice stone is used for polishing and removing the little inequalities which appear on the surface of the ware; after rubbing with pumice stone, the ware is subjected to heat in any convenient manner sufficient to cause the varnish to flow, by which means it is equally distributed; the ware is removed from the heat after the flow of varnish, and is allowed to cool.

Claim.—The described mode of polishing japanned and varnished ware, whereby we are enabled to give a better polish with less labor than can be given in any other known manner.

No. 28,957.—W. BIRKBECK, of Jersey City, N. J.—*Improvement in Steam Engines*.—Patent dated July 3, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* operating the secondary valve *V** by the excess of pressure in the newly open port *f* or *f*¹ over that which is acting in the cylinder to complete the stroke of the piston, substantially in the manner set forth.

I also claim, in connection therewith, so constructing and arranging the valves, ports, and passages, that the pistons, or equivalents, *V V*¹, which are moved in the chamber *a* by such excess of pressure, are themselves puppet valves for the exhaust, and make a tight contact with the seats *w w*¹, substantially as and for the purposes set forth.

No. 28,958.—JOEL S. BLOOD and JAMES W. MILLER, of Newport, N. H.—*Improved Socket for Fence Posts*.—Patent dated July 3, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The socket A for the reception of the fence posts, constructed substantially as described.

No. 28,959.—EZEKIEL BOOTH, of Troy, N. Y.—*Improvement in Sewing Machines*.—Patent dated July 3, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Causing the spreader *c* to spread the loop of the looper thread by a mechanism that is independent of the mechanism that operates said looper, and whilst said looper remains stationary, and after the needle has cleared the same, substantially in the manner and for the purpose described.

No. 28,960.—WILLIAM E. BOULGER, of Janesville, Wis.—*Improvement in Machines for Cutting Fats*.—Patent dated July 3, 1860.—This invention consists of a series of peculiarly shaped knives, rotary and stationary, arranged to work in such a manner that they may cut the fat into the smallest required pieces with rapidity without becoming clogged.

The inventor says: I *claim*, first, the combination of the rotary serrated knives C, and stationary knife D, constructed and arranged substantially as and for the purposes explained.

Second. The arrangement of the beater I K in the described relation to the rotary knives C and stationary knives H, acting to recut the fat, and also preserve the knives C from clogging, as set forth.

Third. The vertical sliding plate F, and springs *a*, in combination with the knife D, substantially as and for the purposes set forth.

No. 28,961.—CHARLES A. BOYNTON, of Hyde Park, Vt.—*Improved Clothes Frame*.—Patent dated July 3, 1860.—This clothes frame is either to be hung up in a room or out of doors, and for this purpose the pulleys *d d d*¹ are used, over which the rope G passes; the pulley *d*¹ has a stop piece *g* applied to it for nipping the rope and holding the frame at any desired height.

Claim.—A clothes dryer composed of two hubs A C, arms B, braces E, ropes *c*, legs J, and rod F, arranged and constructed as shown and described.

No. 28,962.—JAMES F. and ISAAC W. BRISTOW, of Vevay, Ind.—*Improved Machine for Jointing Staves*.—Patent dated July 3, 1860.—This invention consists in so constructing a stave jointer that the stave will always be presented to the knife perfectly parallel, and the joint be cut the proper shape. It also consists in a novel device for clamping the staves when cutting, and also in the use of two guides to guide the knife to cut the proper curve to form the bilge and chamfer, and making the guides adjustable to give the proper chamfer to any sized staves for making barrels.

The inventors say: We *claim* the guides F F¹, stops O, cross-head M¹, vertical piece M, and spring N, arranged substantially as and for the purposes set forth.

We also claim the vibrating lever H, links I, stops J, bolt L, and springs L¹, for operating frame P, and clamping the staves, substantially as described.

We also claim the groove V in the knife U, to act as a guide and prevent it becoming dull by passing over the guides F and F¹, as set forth.

No. 28,963.—THOMAS ALFRED BRYAN, of Queenstown, Md.—*Improvement in Dredging Apparatus*.—Patent dated July 3, 1860.—The principal elements of this improvement are a vertical horse power drum A, a cradle P, a bucket B, and a pulley float N.

Claim.—The arrangement of the vertical drum A with the cable P, the pulley float N, the bucket B, and the mud receptacle C, substantially in the manner and for the purposes set forth.

No. 28,964.—R. P. BUTTLES, of Mansfield, Pa.—*Improved Wrench*.—Patent dated July 3, 1860.—The claims and engravings explain the nature of this invention.

The inventor says: I *claim*, first, constructing the die with a transverse groove across the face, for the purpose of holding a straight bar-crotch wrench, for the purpose set forth.

Second. Constructing the handle of the wrench with an open space or recess at the end, above the die seat, in combination with a die open at the side, whereby the same die is available both as a socket and crotch die.

Third. The combination of the projecting flange on the die with the pawl, when so arranged as to project over this flange and hold the die to the ratchet handle.

No. 28,965.—ANGUS CAMPBELL, of Jersey City, N. J.—*Improved Apparatus for Working Anchors*.—Patent dated July 3, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the plate *f*, hinged to the rolling block *d*, for the purposes and as specified.

Second. I claim the chain *g*, attached at one end to the rolling block *d*, and at the other end taking the pin 5, for holding the anchor in place, or disconnecting by the self-acting movement in casting anchor, as set forth.

Third. I claim the slide 6 and T-shaped end 7 to the chain *i*, for liberating the ring of the anchor when the slide 6 is allowed to move, as set forth.

Fourth. I claim the combination of the stopper *k* and rolling block *d*, by means of the chain *l*, whereby both ends of the anchor can be simultaneously liberated, as described and shown.

Fifth. I claim the chain *m* and wheel *n*, in combination with the rolling block *d*, and acting in the manner and for the purposes set forth.

No. 28,966.—CHARLES W. CHAPMAN, of Hartford, Conn.—*Improved Ice Breaker*.—Patent dated July 3, 1860.—This invention consists in the construction of a cylindrically shaped metallic case, with a toothed disk stamper, to break ice into fragments for various purposes.

Claim.—The arrangement of the cylinder A, draw B, and toothed disk D, in combination, for the purpose and in the manner set forth and described.

No. 28,967.—L. S. CHICHESTER, of New York, N. Y.—*Improved Lemon Squeezer*.—Patent dated July 3, 1860.

The inventor says: In this invention I employ a cap and cone, arranged so that a lateral pressure is exerted against the lemon, and in such a way as to fully express the juice with a moderate application of power. I also employ, in connection with the cap and cone aforesaid, a cup, so arranged as to hold or retain the juice and serve as a convenient means to pour the juice into the receptacle prepared for it.

Claim.—The combination of cap E, cone C, and cup A, substantially as and for the purpose described.

No. 28,968.—COUNCIL CLARK, of Andersonville, Ga.—*Improvement in Cultivators*.—Patent dated July 3, 1860.—A brace, consisting of two straight and parallel ends *c c* and an arched connecting part *c*¹, is fastened to the plough beam *d*, by means of the bolts *e i* passing through both ends of the brace. The upper end of the plough shank *a* is also secured to the rear end of the plough beam by the bolt *e*, while the lower part of the shank *a* is bolted to the brace *c* at *c*¹.

Claim.—The arrangement of the arched brace *c c c*¹, in combination with the plough beam *d*, standard *a*, and runner *j*, in the manner and for the purposes set forth.

No. 28,969.—AARON B. COOLEY, of Philadelphia, Pa.—*Improvement in Dumping Railroad Cars*.—Patent dated July 3, 1860.—This invention consists of a car body of any suitable form having at or near its opposite ends flanged wheels on permanent axles, and any convenient number of hinged doors carrying flanged wheels; the whole being combined with rails so constructed and arranged that as the cars traverse the same the doors may be self-opening, thereby discharging the load, and self-closing, thereby forming the bottom of the car ready for the reception of another load.

Claim.—The body A of the car, having at or near the opposite ends the wheels *b b* turning on permanent axles, and any convenient number of doors D carrying wheels *h h*, in combination with rails H and H¹ and I and I¹, so constructed and arranged that as the car traverses the said rails, the doors may be self-opening and self-closing, as set forth, for the purpose specified.

No. 28,970.—A. B. COOPER, of Gratis, Ohio.—*Improved Churn*.—Patent dated July 3, 1860.—This invention consists in a device for operating the dasher of the ordinary or common dasher churn, for the purpose of rendering the operation of churning less laborious; also, in adapting the same to churns of any altitude or height.

Claim.—The described mechanism for operating a churn dasher, the same consisting of the following parts: base B, upright E, block *c*, hand lever F, pivotted bar *d*, links *e f*, and springs *k l*, as combined and arranged in relation to each other, for the purposes specified.

No. 28,971.—L. E. CUSHMAN and J. S. FRENCH, of North Bloomfield, N. C.—*Improvement in Rock Drills*.—Patent dated July 3, 1860.—This invention consists in the use of a swinging weight, arranged with a drill and automatic turning or rotating device, all being placed on a mounted and adjustable frame.

The inventors say: We claim, first, the arrangement of the swinging weight C, drill rod F, ratchet G, and the pawl H, attached to rock shaft E, in combination with the adjusting frames *a b c*, operated substantially as and for the purpose set forth.

Second. The handle D, when attached to the weight C by means of the joints and segment bar, to admit of the lateral adjustment of the handle, as specified.

No. 28,972.—HENRY DALTON, of New York, N. Y.—*Improvement in Trusses*.—Patent dated July 3, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A truss, combining the belt A, slide C, hinge E, and set screws *h h*, when the same shall be arranged and operated as herein described and for the purpose specified.

No. 28,973.—CHARLES DIGETON, of Philadelphia, Pa.—*Improved Potato Parers*.—Patent dated July 3, 1860.—This invention consists in extending the shank of the blade entirely through the handle, with a nut on the end to tighten the blade against a milled ferrule, and thus secure it at any desired angle with the guard.

Claim.—The method herein described of adjusting the blade to the guard, by means of the

milled ferrule, in combination with the nut B, on the shank of the blade, substantially as set forth.

No. 28,974.—CELESTO DOMINIQUEZ, of San Francisco, Cal.—*Improvement in Quartz Crushing Apparatus*.—Patent dated July 3, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* combining a crushing apparatus with a pulverizing apparatus, when constructed and operated as herein set forth.

I also claim, in combination with a pulverizing apparatus, constructed and operating as described, an amalgamating wheel T, having a metal bottom *i* and working on a metallic plate *m*, in the manner and for the purpose herein set forth.

No. 28,975.—TIMOTHY DRAKE, of Windsor, Conn.—*Improved Machine for Sawing Boards into Required Lengths*.—Patent dated July 3, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination and arrangement of the vibrating circular saw frame C, and its saw D, with the swinging feed roller frame F and its roller *g*, the gauge head H, with an opening in the table, as represented, to allow the cut boards to fall after they have been sawed off; all operating in the manner and for the purposes herein set forth.

No. 28,976.—JOHN DYKEMAN, of Greenbush, N. Y.—*Improved Variable Exhaust for Locomotive Engines*.—Patent dated July 3, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the conical nozzle C C with the exhaust pipes B B, as constructed, in such a manner that four steam passages may be employed when necessary, or only two may be used, and the steam concentrated in said nozzles, thereby diminishing or increasing the draught of the fire, as is herein fully set forth.

No. 28,977.—J. H. ENHOLM, of St. Louis, Mo.—*Improved Burglar's Alarm*.—Patent dated July 3, 1860.—The frame or chief part of this invention is shown at A¹; it consists of a small metal shell or box into which is introduced a percussion hammer D, a spring F, and a second spring Y.

The inventor says: I *claim* the described arrangement of the spring F, the hammer D, and the trigger Y, within the shell or frame A¹, constructed as described.

I also claim the combination of the barrel C with the described arrangement of spring F, hammer D, and trigger Y, within the frame or shell A, for the purpose specified.

No. 28,978.—RICHARD J. GATLING, of Indianapolis, Ind.—*Improvement in Cotton Cultivators*.—Patent dated July 3, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, a rotary cutter head, provided with hoes or cutters capable of being adjusted, to vary the depth of their cut, as well as to escape or pass over obstructions that may be in their path, substantially as herein shown and described.

Second. The employment of two adjustable plough shares or scrapers, capable of scraping or cultivating both sides of the rows of cotton or other plants by once passing over the ground, when arranged and constructed substantially as set forth.

No. 28,979.—DANIEL C. GERARD, of Patchogue, N. Y.—*Improved Centre Board for Vessels*.—Patent dated July 3, 1860.—G is a shaft that passes longitudinally through the box B above the board C, and has its bearings in each end of the box B; from this shaft, which is a rolling shaft, is hung the centre board C by chains or ropes *e e*, one connecting with the front end of the board C and the other with its rear end; the shaft G carries a level spur wheel I on its rear end which engages with a horizontal level wheel J, the shaft of which is in an upright position.

Claim.—The arrangement and combination, with a centre board C, in the manner herein shown and specified, of the lateral rollers *a a* projecting through upon each side of the board C, the longitudinal end rollers *b b* lifting the shaft G, driving shaft I, and gear wheels, all as set forth and for the purposes specified.

No. 28,980.—JOHN GRIFFIN, of Louisville, Ky.—*Improvement in Cotton Pickers*.—Patent dated July 3, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement of the cylinder F, chamber C, valve chest B, and exhaust receiver G, in connection with the picker tube A, and cup B, substantially as and for the purpose set forth.

Second. The arrangement of the picker tube A with the condensed air chamber C, valve chest D¹, and pipe O communicating with the cup B¹ and valve chest, as and for the purpose specified.

Third. Attaching the cotton conducting tube or tubes N to the carriage by means of the tube Q suspended or hung on trunnions N N¹, and the hollow stem R fitted within the tube Q and secured therein by the springs S S, substantially as described.

Fourth. The combination of the flexible and open tubes N, for the purpose specified.

No. 28,981.—WILLIAM GRIFFIN, of Bennettsville, S. C.—*Improvement in Ploughs*.—Patent dated July 3, 1860.—The claim and engravings explain the nature of this invention.

Claim.—In connection with a mould board and landside, in one piece, and united to the standard E by a strap and key, the arrangement of the two braces J K, as herein described and represented, for holding the several parts to the beam, as set forth.

No. 28,982.—W. S. HARRISON, of Carson's Landing, Miss.—*Improvement in Adjusting Tire on Wheels*.—Patent dated July 3, 1860.—This invention consists in the use of a metal sectional felloe, in connection with a screw rod, cap, and lips on the tire.

Claim.—The metal felloe B, lips c c at the ends of the tire C, the screw rod D, and cap E, arranged and applied to the wheel, substantially as and for the purpose set forth.

No. 28,983.—WILLIAM HATHAWAY, of Providence, R. I., assignor to himself and DANIEL H. TILLSON, of said Providence.—*Improved Clothes Frame*.—Patent dated July 3, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the cross bars of the frame with a hinged collar, so arranged that the end of the bar pivoted to the collar extends beyond the joint pivot towards the centre of the collar, and bears against the under side of the arms and is supported by them from dropping, substantially as described, for the purpose set forth.

No. 28,984.—JEREMIAH HEATH, of Providence, R. I.—*Improvement in Skates*.—Patent dated July 3, 1860.—This invention consists in making the sole plate conform to the shape of the shoe, and of one piece of thin steel, and fixing a runner or skate iron to said plate of a peculiar construction, having a slip joint immediately behind the ball of the foot.

Claim.—The runner, made in two parts A A¹ and united by a slip joint, in combination with the elastic steel sole plate B, the whole arranged and operating upon the principle set forth.

No. 28,985.—ABEL T. HOWARD, of Hartford, Vt.—*Improvement in Odometers*.—Patent dated July 3, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the cam-shaped tooth g, constructed and combined with a toothed wheel in the manner described, to impart an intermittent motion to the said wheel and prevent its rotation at other times.

Second. The combination and arrangement of the plate D, eccentric pawl E, and ratchet wheel G, for the purposes set forth.

No. 28,986.—WESTEL W. HURLBUT, of Muscatine, Iowa, and J. HURLBUT, of Chicago, Ill.—*Improved Machine for Sawing Staves*.—Patent dated July 3, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim*, first, the arrangement of the saws and manner of adjusting them to any required angle, to cut a plane-faced stave for barrels of larger or smaller diameter.

Second. The stave cut straight from each outer edge to the centre, forming any required angle, in the manner as above described, or its equivalent.

No. 28,987.—BENJAMIN A. JENKINS, of White Water, Wis.—*Improvement in Machines for Windrowing Sugar Cane*.—Patent dated July 3, 1860.—This invention consists in the combination of two furrow ploughs, arranged to turn furrows in opposite directions upon the windrowed cane, with a cane windrowing machine.

Claim.—The combination, in the manner described, of two furrow ploughs H H, arranged to turn furrows in opposite directions, with a cane windrowing machine, constructed and operating substantially as described, for the purpose specified.

No. 28,988.—ADOLPHUS B. JOHNSON and MILTON H. VAUGHAN, of Clarksville, Ark., and J. STINNETT, of Shelby County, Tenn.—*Improvement in Detaching Horses from Vehicles*.—Patent dated July 3, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim* attaching the pole or thills of a carriage to the front axle by means of the lugs h which fit into triangular recesses of the brackets F, the latter being secured to the front axle, substantially in the manner described.

We also claim, in combination with the thills K, lugs h, brackets F, bolts K, and rock shaft G, the lever L for operating the bolts k, substantially in the manner described.

We also claim giving the lever L, by which the rock shaft G is operated, a curved shape, so as to embrace the hub of the wheel when operated, and to arrest the motion of the carriage, when the horses are detached therefrom, substantially in the manner described.

No. 28,989.—WILLIAM JOSLIN, of Cleveland, Ohio.—*Improvement in Mills*.—Patent dated July 3, 1860.—This invention consists of a reverse operation of grinding, also of blowing air into the grain between the reverse grinders, after the grain is partly ground, and a self-regulating feed ring and hopper bottom.

The inventor says: I claim, first, dividing the runner and reversing the motion of the separate parts, as described.

Second. The introduction of air through the unbroken space between the upper runner B and the lower runner A, from the fans N N N N in the upper runner B, as specified.

Third. The self-regulating feed ring and hopper bottom for regulating the feed of the grain, as set forth.

No. 28,990.—CHARLES F. LANGFORD, of Fall River, Mass.—*Improvement in Railroad Brakes*.—Patent dated July 3, 1860.—B B are the straps that connect and brace the jaws; to the straps are secured the pieces n by welding or bolting; said pieces have slots i cut in the ends; levers D are supported and have their fulcrums in slots i and pass diagonally across the face of the wheels e.

Claim.—Hinging the levers D, which support the brake rubbers, to the ends of the pedestal brace B, when constructed and operated substantially as described.

No. 28,991.—Z. W. LEE and E. D. LEE, of Blakely, Ga.—*Improvement in Cotton Bale Ties*.—Patent dated July 3, 1860.—This invention consists of a tie plate, as shown in the claim and engravings.

Claim.—The tie plate C D, constructed, applied, and operating as described, for the purpose set forth.

No. 28,992.—JAMES MARTIN, of Florence, Ind.—*Improvement in Water Wheels*.—Patent dated July 3, 1860.—This invention is a new arrangement of parts, whereby a full head of water may be brought to act upon all the buckets of a centre vent wheel; at the same time the water will have a free discharge, and not be crowded back against the bucket.

Claim.—In centre vent water wheels the combination of the horizontal sluices D, vertical pipes E E, and chutes C C, when arranged relatively with the buckets of the wheel, the whole constructed and operated in the manner and for the purpose set forth.

No. 28,993.—JAMES S. McCURDY, of Brooklyn, N. Y.—*Improvement in Sewing Machines*.—Patent dated July 3, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Driving the needle of a sewing machine by means of a wrist pin, or its equivalent, attached to a gear or wheel which is caused to roll round a stationary gear, wheel, or circle of a similar diameter, and so to give the said wrist pin, or equivalent, an epicycloidal movement, substantially as described.

No. 28,994.—NATHANIEL S. McFARLAN, of Syracuse, N. Y.—*Improvement in Attaching Sash Stops to Windows*.—Patent dated July 3, 1860.—The inventor says: I construct my invention of brass or malleable iron; the spring is placed on the jam casing of the window directly under the window stop; the fastener is placed in the stop and meshes in the adjustable spring which holds the stop in its place.

Claim.—Said self-adjusting window spring and stop fastener.

No. 28,995.—CHARLES S. MOORE, of Alexandria, Va.—*Improved Mode of Connecting Car Bodies with Trucks*.—Patent dated July 3, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Securing the trucks of a car, locomotive, or tender, to the body or frame by means of the connections described, so that whilst the trucks have the usual play on the body or between the rails they will, in case of the breaking of the wheels or axles, or both, be held parallel, or nearly so, to the body or frame, and thus prevent the car, locomotive, or tender, from being thrown off the track, substantially as described.

No. 28,996.—HUGO MUELLER, of New York, N. Y.—*Improvement in Sewing Machines*.—Patent dated July 3, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim the so connecting of the needle arm of a sewing machine with the driving shaft thereof, as that the said arm or the needle bar which it drives may be instantly stopped or started, whilst the shaft runs continuously and at full speed, substantially in the manner and for the purpose described.

No. 28,997.—FREDERICK WM. NIEHAUS, of Boston, Mass.—*Improved Piano Forte Action*.—Patent dated July 3, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* arranging not only the support bar D, and the fulcrum of the lever B, between the back catch F and the fly E, but the regulator cam *d*, on the back of the supporting bar and its adjusting screw *f*, in such bar, in manner as specified.

I also claim applying or arranging the back draft strap to K, the back catch F, and the loaded arm I, as described.

I also claim the arrangement of the damper lever relatively to the hammer and its back rest block—that is, placing it between the head and tail block of the hammer, and so as to pass under the back rest bar, as specified.

No. 28,998.—JOHN B. NORRIS, of Berryville, Va.—*Improvement in Tuning Pianos*.—Patent dated July 3, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the manner or mode of tuning pianos, harps, and other similar instruments, by means of a grooved pulley *h h*, in the end of an adjusting, tightening screw and draft pin *e e f f*, by combining and arranging said devices with a continuous string *k k k k*, passing around the pulley *h h*, so that the point of contact and draught in the centre or middle of the string, instead of at the extremities, and by which means the pressure or strain of the string is divided upon the centre or middle, and at both extremities where hitched; thus giving an equality of draught throughout both parallel lengths $k^2 k^2$, and through all of which the parallel lengths $k^2 k^2$ are readily and most perfectly put in unison, or tuned to the required degree of unison or pitch, or slackened as desired, substantially in the manner as set forth and described.

No. 28,999.—T. J. PENNY and W. B. BOTSFORD, of Wooster, Ohio.—*Improvement in Sewing Machines*.—Patent dated July 3, 1860.—The nature of this improvement is shown in the claim and engravings.

Claim.—The combination of the wiper J, the rising and falling upright rockshaft J¹, the arm J², rod L, and inclined plane *j*, with the needle lever D E, and feeding slide I, substantially as described, to produce the necessary movements of the feeding slide by means of the needle lever.

No. 29,000.—WILLIAM PHELPS, of Sycamore, Ill.—*Improvement in Transmitting Motion to Machinery*.—Patent dated July 3, 1860.—The object of this invention is a peculiar combination of disks and friction wheels adapted to communicate a continuous rotary motion without the use of cog gearing.

Claim.—The combination of the disks B C and D, and rollers G and H, operating substantially as and for the purposes set forth.

No. 29,001.—WILLIAM PHELPS, of Sycamore, Ill.—*Improvement in Car Axles*.—Patent dated July 3, 1860.—This invention relates to axles which are swivelled so as to allow the wheels to rotate independently, and consists of an improved device for the purpose of combining great strength and freedom of motion.

Claim.—The swivelled axle A B, disk plates D and E, yoke G, and rollers H, constructed and combined substantially as and for the purposes set forth.

No. 29,002.—BENJAMIN L. PHILLIPS, of Providence, R. I.—*Improvement in Machines for Engraving Copper Cylinders*.—Patent dated July 3, 1860.—This improvement is particularly applicable to pentographic engraving machines, in which the motions of the cylinders and of the engraving points are governed by a tracer point which is carried by the hand of the operator over the lines of the drawing or sketch to be engraved.

The inventor says: I *claim*, first, making the carriage of the graver supporter in two parts D and C, and hinging them together as set forth, for the purpose specified.

Second. Connecting the carriage D C with the shaft X, by means of metallic bands, as set forth, for the purpose described.

Third. The shoe P, upon the end of the graver arm, as applied to machinery for engraving cylinders.

No. 29,003.—CAREY PITTS, of Troy, N. Y.—*Improved Sawing Machine*.—Patent dated July 3, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Raising a saw or saw gate by a positive motion and against the action of a spring, which spring, when the raising mechanism ceases to act, brings down the saw into the stuff to be cut with a quick jerk or motion, substantially in the manner described and represented.

No. 29,004.—DAVID R. PRINDLE, of East Bethany, N. Y.—*Improved Pressure and Vacuum Valve for Steam Boilers*.—Patent dated July 3, 1860.—This invention consists of an improved

valve, which is to be used either for safety against excess of internal or external pressure, or of both, at different times, in the same boiler or vessel, and is entirely complete and independent in itself, requiring nothing but a simple aperture in the boiler or vessel to receive it.

Claim.—The construction, arrangement, and combination of parts, substantially as described, so as to produce a combined expansion and vacuum valve entirely unattached, except by its weight and simple contact, to the boiler or vessel in which it is used, and consequently portable and transferable for the conveniences and purposes specified.

No. 29,005.—VEITUS RADSPINNER and WILLIAM H. MOSS, of New Richmond, Ohio.—*Improved Lubricating Compound.*—Patent dated July 3, 1860.—This compound is composed of the following ingredients, in the stated proportions: thirty pounds caustic lime, fifteen ounces calcined magnesia, fifteen ounces Husband's or Henry's magnesia, (carbonate of magnesia,) fifteen ounces pulverized soap stone, fifteen ounces chloride of lime, and one gallon alcohol, to which is added sufficient quantities of water and oil.

Claim.—The preparation of a homogeneous lubricating compound of the ingredients, in the proportions and in the manner, substantially as set forth, for application as a lubricator to all surfaces subject to friction.

No. 29,006.—FITZ JAMES RICE and GEORGE W. HAYWARD, of Providence, R. I.—*Improvement in Rollers for Pressing Dough.*—Patent dated July 3, 1860.—The claim and engravings explain the nature of this invention.

Claim.—As a new article of manufacture, a hand roller covered with vulcanized rubber or gutta percha, and furnished with handles B, for the purpose of rolling dough against cutters in making candies or confectionery, as set forth and explained.

No. 29,007.—EDWARD S. RITCHIE, of Brookline, Mass.—*Improved Mechanism for Stopping and Starting City Railroad Cars.*—Patent dated July 3, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim the combination of the following elements, or their mechanical equivalents, adapted and arranged together as explained, viz:

1. The spring F.
2. The two separate barrel heads connected respectively with the ends of the spring F.
3. The two clutch gears or ratchets *l l'*.
4. The two clutches H I, and—
5. The two friction brakes of the two heads *c d*—such combination being applied to the wheel axle, and so as to operate substantially in manner and for the purpose as described.

I also claim the combination of mechanism applied to both ends of the carriage, to the brakes and the clutches, and for operating the brakes and clutches from either end of the carriage, as specified.

No. 29,008.—HENRY H. ROBERTSON, of Kingston, Mo.—*Improved Fly Trap.*—Patent dated July 3, 1860.—This invention consists in the use of a vertical suspension standard, in combination with a case having an opaque funnel-shaped fly entrance passage at its top, and tubular opaque fly entrance passage at its bottom.

Claim.—The employment of the vertical suspension standard, in combination with a case having an opaque funnel-shaped fly entrance passage at its top, and tubular opaque fly entrance passage at its bottom, substantially as and for the purposes set forth.

No. 29,009.—CHARLES ROSE, of Allentown, Pa.—*Improved Device for Straining Scroll Saws.*—Patent dated July 3, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the lever, link, hook, thumb, nut, and noddle iron, substantially as described, for the purpose of making a convenient and effective connecting and disconnecting device for the saws of scroll sawing machines and for straining them up in the gate, as set forth.

No. 29,010.—JOAN RUOF, ANTHONY HEUPEL, and FRANK LEUTHY, of Lancaster, Pa.—*Improvement in Grinding Mills.*—Patent dated July 3, 1860.—This invention consists in a manner of laying off the dress of the mill stones, so that they will the more effectually grind grain, and the quantity ground will be increased with a given power.

Claim.—The two plates E F, arranged and operating as described, when their dress is laid off in spiral eccentric grooves *c c¹ c²*, as described and represented, for the purpose set forth.

No. 29,011.—FRANCIS SCHAWLM, of Joliet, Ill.—*Improvement in Rock Drilling Machines.*—Patent dated July 3, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the clamp bars I I¹, when attached to the boxes J, which are formed of two laterally sliding parts *c d*, fitted on conical or taper uprights A, and operated through the medium of the rods H H and arms L L G, substantially as and for the purpose set forth.

I further claim the adjustable bar P, one or more, when applied to the bars I I¹, substantially as shown, to admit of the simultaneous employment of drills of varying diameters.

No. 29,012.—FREDERICK LEIDLE and SAMUEL EBERLY, of Mechanicsburg, Pa.—*Improvement in Horse Rakes*.—Patent dated July 3, 1860.—This invention consists in arranging the pressure bar extending across the teeth to hold them down, back of the rear bar of the rocking frame, in order to bring it more nearly over the points of the teeth, for the purpose of giving increased support and steadiness to the teeth.

Claim.—The combination of the rocking frame supporting the rake with a spring pressure bar extending across the rake teeth and bearing upon them, back of their rear support on the frame.

No. 29,013.—JOHN G. SHAFER, of Fulton County, Pa.—*Improvement in Mill Bushes*.—Patent dated July 3, 1860.—This invention consists in so arranging the parts of a mill bush that it shall operate to tighten itself by the force of gravitation, the followers being held in the place into which they fall by means of pawls and ratchets.

Claim.—The combination of the follower F, the pawls *p*, and ratchet R, to form a mill bush which will tighten itself by the operation of gravity, substantially in the manner described.

No. 29,014.—GIDEON SIBLEY, of Troy, N. Y.—*Improved Machine for Turning Cylinders*.—Patent dated July 3, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the spiral cutter E, varied in the form of its surface and edges according to the form to be cut upon the block, as described.

Second. The spiral cutter E, in combination with the several pairs of spindles *a a*¹, arranged and operating substantially as described.

Third. The mode of rotating and holding the cylinder bearing the spindles *a a*¹, &c., by means of a crank wheel O and cam *i*, the latch arm 2 and latch *f*², stop rod *d*, and the ratchet wheel I, arranged and operating substantially as described.

Fourth. The compressing arch Y, constructed and operating in combination with the spindles *a a*¹, &c., substantially as described.

No. 29,015.—GEORGE S. G. SPENCE, of Boston, Mass.—*Improvement in Apparatus for Distilling Sea Water*.—Patent dated July 3, 1860.—This invention consists in the arrangement and combination of a boiler with a movable condensing apparatus, and a funnel receptacle within the chamber of the boiler for discharging the condensed distillate therefrom.

Claim.—The arrangement of the receptacle B, in combination with the boiler A and condenser C, in the manner substantially as and for the purposes set forth.

No. 29,016.—GEORGE R. STEVENS, of Clarksville, Mo.—*Improvement in Shoeing Horses*.—Patent dated July 3, 1860.—This invention consists in the combination of a sliding rest with a swinging frame, guide or rollers, and arched guide way, for the purpose of constructing an adjustable rest for a horse's foot while being shod.

Claim.—The combination of the sliding rest *b* with a swinging frame *e a c c*, guide or rollers *d d*, and arched guide way *g*, for the purpose of constructing an adjustable rest for a horse's foot while being shod, substantially as set forth.

No. 29,017.—ANDREW J. SWEENEY, of Wheeling, Va.—*Improvement in Moulds for Glass Goblets, &c.*—Patent dated July 3, 1860.

The inventor says: This is an improvement in the form of moulds for making the foot on a goblet, or other article which may be made of glass, by the use of which the foot is made ready to finish without having or showing the mark of a mould joint on its surface.

Claim.—The combination of the block D with the piece K, or its equivalent, and with the piece E E¹, operating as above described and for the purpose set forth.

No. 29,018.—PHIL. TOMPERT and JOHN COYLE, of Louisville, Ky.—*Improvement in Apparatus for Rendering Fats*.—Patent dated July 3, 1860.—In this invention the kettle is surrounded with a steam jacket, into which the steam is conducted through a pipe terminating in two bent branches, perforated with holes of different sizes, for the purpose of causing the steam to heat all parts of the kettle with equal intensity.

Claim.—As an improved article of manufacture, a tub A, arranged with a kettle C, and

steam pipe E, with the perforated branches c, and a cold water pipe F, and faucets e and f, as and for the purposes set forth and described.

No. 29,019.—A. P. TORRENCE, of Oxford, Georgia.—*Improved Machine for Felling Trees.*—Patent dated July 3, 1860.—This invention is an improvement on a tree-felling and girding device, for which letters-patent were granted December 6, 1859. The object of the invention is to simplify the patented device above alluded to.

Claim.—The two levers B D, provided respectively with the cutter A, and rollers C E, and connected by the bars F, substantially as and for the purpose set forth.

No. 29,020.—HORACE TRUMBULL, of Jersey City, N. J.—*Improvement in the Manufacture of Glass.*—Patent dated July 3, 1860.—This invention consists in making a new composition for the manufacture of flint glass, in which the usual ingredient, oxide of lead, is replaced by the oxide of zinc.

Claim.—The substitution of the oxide of zinc for the oxide of lead in the composition of ordinary flint glass, substantially in the manner and for the purpose fully set forth.

No. 29,021.—SILAS T. VALLETT, of Providence, R. I.—*Improved Washing Machine.*—Patent dated July 3, 1860.—This invention consists in arranging in the interior of a tub or box a central slatted clothes chamber, in combination with two fans revolving in opposite directions, for the purpose of agitating the water and forcing it through the clothes.

Claim.—The arrangement in the interior of the tub or box A of the central slatted clothes chamber D, in combination with the revolving fans F, constructed and operating as and for the purposes specified.

No. 29,022.—ISAAC W. VAN HOUTEN, of Philadelphia, Pa.—*Improvement in Car Couplings.*—Patent dated July 3, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, reducing the lower end of the coupling pin D, and forming a collar e on the same, the part reduced and the collar being so arranged in respect to the upper opening i of the buffer piece that the pin is rendered self-retaining in an elevated position in the said opening, as set forth.

Second. Forming on the pin an enlargement with upper and lower bevels, the said enlargement being arranged in respect to the larger lower opening and smaller upper opening of the buffer block, as and for the purpose set forth.

No. 29,023.—CORNELIUS J. VAN OECKELEN, of New York, N. Y.—*Improvement in Melodeons.*—Patent dated July 3, 1860.—This invention consists in combining, with an ordinary melodeon A, a support B, on which the wrists of the performer shall rest, and which support B being connected with the bellows C of the instrument, by means of the uprights D D, enables the party performing upon the instrument to supply sufficient air for the production of sound without using his feet or employing an assistant.

Claim.—The combination of the support B, uprights D D, and melodeon A, when the same shall be arranged and operated as described and for the purpose as set forth.

No. 29,024.—WILLIAM M. WALLACE, of Cameron, Ill.—*Improvement in Portable Fences.*—Patent dated July 3, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A portable fence, in which the posts A B and C are combined with the rails D E F, as described and shown, and for the purposes set forth.

No. 29,025.—JEROME WHEELOCK, of Worcester, Mass.—*Improvement in Centrifugal Governors for Steam Engines.*—Patent dated July 3, 1860.—This invention consists in attaching springs to the arms or balls of the common centrifugal governor, so as to nearly counterpoise or counteract the centrifugal force of the balls, they acting with an increasing force in proportion as the balls increase in centrifugal force, as they pass from a smaller circle to a larger one by the increase of speed.

Claim.—The hold fasts F F and the springs G G, constructed and operating in the manner as set forth and described.

No. 29,026.—WILLIAM WILMINGTON, of Toledo, Ohio.—*Improvement in Harvesting Machines.*—Patent dated July 3, 1860.—This invention consists in arranging a hinged platform and feeding apparatus with a threshing cylinder.

Claim.—The combination of the contracting hinged platform, the rotary reciprocating rakes O O¹, and short threshing cylinder, when the parts are arranged and operated jointly with the harvesting and winnowing apparatus, in the manner and for the purpose specified.

No. 29,027.—J. C. WILSON, of Cedar Hill, Texas.—*Improvement in Gang Ploughs*.—Patent dated July 3, 1860.

The inventor says: My invention can be used in ploughing lands of almost any character, but it is particularly designed for ploughing prairies or extensive tracts of land and in places where it may be desirable to carry the tools and implements for cultivating the soil from one tract to another.

Claim.—The arrangement of the plough frame upon the wagon frame, as and for the purpose described.

No. 29,028.—EDWIN A. WOODS, of Utica, N. Y.—*Improvement in Boiler Feeders for Steam Engines*.—Patent dated July 3, 1860.—This invention consists in regulating and controlling the pump or hydrant and the alarm whistle by means of the height of water in the boiler, and by the expansion and pressure of steam.

The inventor says: I *claim* the arrangement of the float L, cylinder N, and piston O, constructed and operating as described, in combination.

Also the said float, cylinder, and piston, constructed and operating as described, in combination with the alarm whistle.

No. 29,029.—HJALMAR WYMBLAD, of West Hoboken, N. J.—*Improved Mousing Hook*.—Patent dated July 3, 1860.—The claim and engravings explain the nature of this invention.

Claim.—As a new article of manufacture the projection *p* on the hook, the ring *r* having a recess or notch *n* on the inner peripheries, and the spring *s*, arranged substantially as and for the purpose specified.

No. 29,030.—CHRISTIAN YOST, of Intercourse, Pa.—*Improved Machine for Pointing Fence Rails*.—Patent dated July 3, 1860.—By removing the carriage and its appurtenances, and placing on the table W, adapted to receive the saw D and rollers H, with its gauge X, the machine is made adjustable for the purpose of sawing laths, clap boards, &c. This table W has also three holes *z* into which the pegs are inserted for the purpose of sawing fuel.

Claim.—The traversing carriage I I, combined with the pivoted and grooved bars K K, and sliding swivel jaws M M, constructed, arranged, and operating in the manner set forth.

No. 29,031.—CYRUS W. BALDWIN, of Boston, Mass., assignor to himself and HENRY MESSER, of said Boston, and LUTHER AIKEN, of Malden, Mass.—*Improved Fastening for Garments*.—Patent dated July 3, 1860.—This invention consists of one, two, or more link hooks, with one end fastened to a plate of metal, and the other end pointed so as to be easily and readily inserted into the skirt or garment to be fastened.

Claim.—The new article of manufacture for fastening garments, described, to wit: a garment fastening consisting of one, two, or more link hooks fastened to a plate, substantially as described.

No. 29,032.—N. S. BEAN, of Manchester, N. H., and J. G. COLLINS, of Boston, Mass., assignors to the AMOSKEAG MANUFACTURING COMPANY.—*Improved Steam Boiler*.—Patent dated July 3, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The described relative arrangement of parts in a vertical boiler having five tubes, the same consisting of an enlarged fire box and dome, contracted waist and submerged smoke box, substantially as set forth.

No. 29,033.—STEPHEN A. BRIGGS, of Philadelphia, Pa., assignor to himself and C. G. CROWELL, of said Philadelphia.—*Improvement in Corn and Cob Mills*.—Patent dated July 3, 1860.—This invention consists in the application of spiral flanges or propelling vanes around the cylinder of the rotary feeder and crusher between horizontal arms, arranged in two vertical rows on the same, for the purpose of giving it a positive feeding capacity; and also in the application of stops in the grooves, or between the raised grinding surfaces of the disks.

The inventor says: I *claim* the application of the spiral propeller vanes *g g* around the cylinder of the rotary crusher A, when the same are arranged in relation to the arms *h h*, substantially as and for the purpose specified.

I also claim the application of the stops *n n*, in combination with the grooves *j j*, and ridges *m m*, on the disks B¹ and C¹, substantially in the manner and for the purpose set forth and described.

No. 29,034.—ARNOLD DE WITT, of Brooklyn, N. Y., assignor to himself, JOHN WIARDA, and J. N. H. DE WITT, of said Brooklyn.—*Improvement in Wind Mills*.—Patent dated July 3, 1860.—This invention consists in arranging, in a rotary frame, a series of fans, to which a rotary motion is imparted by a stationary cog wheel in the centre of said revolving frame and gearing into corresponding cog wheels on the ends of the rotary fans; the whole being

inclosed in a round or polygonal scroll, with a spout to conduct the wind to the fans in such a manner that a light, simple, and powerful wind wheel may be obtained.

Claim.—The employment of a series of revolving fans *A*, with gear wheels *d*, arranged around a stationary cog wheel *e*, in a rotary frame *B*, together with an adjustable scroll *D*, substantially in the manner and for the purpose specified.

No. 29,035.—JOHN FIRST, of New York, N. Y., assignor to himself and JAMES FROST, of said New York.—*Improvement in Sewing Machines.*—Patent dated July 3, 1860.—This invention consist in a certain combination and arrangement of levers and connections, whereby the needle is moved rapidly where there is little resistance, slower when passing through the material, and caused to pause for a short period after it has risen sufficiently to slack the thread, thus adapting its motion to the resistance, and giving time for the passage of the shuttle through the loop of the thread.

Claim.—The combination and arrangement of the crook *C*, lever *D*, radius bar *E*, crank or lever *G*, and connection *H*, for the purpose of giving the proper periods of rest and motion to the needle of a sewing machine, substantially as described.

No. 29,036.—ISAAC M. GATTMAN, of Cincinnati, Ohio, assignor to himself and H. G. STEIBLE, of said Cincinnati.—*Improvement in Brick Machines.*—Patent dated July 3, 1860.—This invention consists in a combination of mechanism by which bricks are rapidly formed under high pressure from untempered clay, and by which the bricks, after being formed, are delivered from the machine by a means which, at the same time, smoothes their surfaces, giving them a finished outer surface.

The inventor says: I *claim*, first, the plunger *H*, slide *I*, and lateral slides *J J*¹, arranged and operating in combination substantially as and for the purpose set forth.

Second. The shafts *b c* at right angles, bevel wheels *E F*, and cams *f f*¹ *g g*¹, or their equivalents, in connection with plunger *H*, slide *I*, and lateral slides *J J*¹, arranged and operating substantially as and for the purpose set forth.

No. 29,037.—SAMUEL H. JONES, of Jamaica Plains, Mass., assignor to HENRY W. SMITH, of West Newton, and S. D. SMITH, of West Roxbury, Mass.—*Improvement in Melodeons.*—Patent dated July 3, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, with a single set of bass and treble reeds, and two swell valves therefor, arranging one swell valve at the back of the reed board, and the other swell valve at the front thereof, substantially as and for the purpose described.

Also arranging the two sets of the treble and bass reeds relatively to the line of range of valve pins, and with respect to each other, as specified.

No. 29,038.—GEORGE A. KEENE, of Lynn, Mass., assignor to himself and SETH D. WOODBURY, of said Lynn.—*Improved Combined Bed and Chair.*—Patent dated July 3, 1860.—This improvement consists in the use of a frame arranged in such a manner as to slide under and from the bed on one side of the same, so that it may be used to move an invalid on when the bed is to be made, or for a watcher, or whenever occasion requires a wider bed; and in so arranging the extension either to operate as a bed or a reclining chair.

Claim.—The combination and arrangement of a bedstead, extension bed or couch, and chair, substantially as specified.

No. 29,039.—LESTER PATEE, of Peoria, Ill., assignor to himself and ABRAM H. RYAN, of said Peoria.—*Improvement in Soldering Irons.*—Patent dated July 3, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The use of a heating centre of wrought or cast iron for soldering, in connection with a movable, tinned, copper cap, when the latter is constructed with a spiral spring, as set forth, for the purpose of keeping the cap and centre in contact under varying temperatures.

No. 29,040.—ELI W. ROWE, of Brewer, Me., assignor to himself and J. T. HARDY, of the same place.—*Improvement in Drain Tile.*—Patent dated July 3, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the tongue *c* and groove *d*, arranged on opposite sides of, and in combination with, the tile, substantially as and for the purpose specified.

I also claim moulding or forming the clay or plastic drain tile, above described, with the tenon recess, and the tenon for side connections, in the manner and for the purpose set forth.

No. 29,041.—HENRY W. SMITH, of Boston, Mass., assignor to himself and SAMUEL D. SMITH, of West Roxbury, Mass.—*Improvement in Harmonions.*—Patent dated July 3, 1860.—The claim and engravings explain the nature of this invention.

Claim.—When two sets of valves are employed with a supplementary lever to be operated by the key, as described, constructing that part of the key frame which supports the key separate from that which supports the supplementary lever, and hinging or applying the two together so as to enable the key and its supporting part of the said key frame to be raised or moved in such manner as to enable access to be had to the inner reed holders as occasion may require.

No. 29,042.—HARRY A. WILLS, of Reeseville, N. Y., assignor to A. W. KINGSLAND, of said Reeseville.—*Improvement in Machines for Making Horse Shoes.*—Patent dated July 3, 1860.—This invention consists in arranging the shaping die or mould of a cylinder machine with a movable front, which, when thrown forward, bends the iron to the required shape and holds it in the proper position until the swaging die gripes it, and then being thrown back allows the iron to spread; and it consists also in the employment of a crank shaft which is subjected to the action of a spring and the bent end of which sweeps over a stationary die, rigidly attached to the side of the frame, forming the bearings for the cylinders, so that at the proper intervals said front is drawn in and the iron set free.

The inventor says: I *claim* the arrangement of the movable front, substantially as described, when the same is used in combination with the shaping die or mould E, on the surface of the rotary cylinder B¹, for the purpose set forth.

Also the arrangement of the stationary cam i, crank h, spring j, and front f, in combination with the shaping die or mould E, constructed and operating as and for the purpose specified.

No. 29,043.—ALLEN AGNEW, of Chester Co., and WILLIAM MORRISON, of Chadd's Ford, Pa.—*Improvement in Cultivators.*—Patent dated July 10, 1860.—This invention consists mainly in the shape of the teeth and the manner of hanging them to the frame, so that the soil will freely rise up and fall behind them without clogging, and so that the teeth may be let down on the frame or its branches as they are worn away by use.

Claim.—A cultivator composed of a stem and branches and teeth projecting from the ends thereof, and secured and made adjustable thereon, as set forth, the whole being constructed and arranged substantially in the manner and for the purposes described and represented.

No. 29,044.—SYLVESTER M. ANDRUS, of Bellevue, Mich.—*Improved Apparatus for Protecting Buildings from Fire.*—Patent dated July 10, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Connecting the wad I, with a tilting and distributing arrangement of water, substantially in the manner as described, so that when an explosion occurs an alarm will not only be given, but water will be discharged almost simultaneously on and around the spot where the fire first communicated with the fuse.

No. 29,045.—GEORGE ARROWSMITH, of Lockport, N. Y.—*Improvement in Grain Separators.*—Patent dated July 10, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The construction and arrangement of the separating chamber B, consisting of the alternate series of angular dividing partitions f, and opposing inclined planes g g, with the blast orifices h h and i i, operating in connection with the fan A, and secondary chambers of separation D D, substantially as and for the purposes set forth.

No. 29,046.—SAMUEL AVERY, of Pisgah, Mo.—*Improvement in Corn Planters.*—Patent dated July 10, 1860.—This invention consists in a peculiar arrangement of gear wheels operated by means of driving wheels which support the machine and connected with a shaft that transmits motion to the various parts of the machine.

The inventor says: I *claim* the main shaft, operated by gearing b b¹, connected with the driving wheels B B, and the brakes P, for regulating the motion of said driving wheels, so that the same shall rotate alike, and be under the control of the operator, as and for the purposes set forth.

I also claim the lime boxes G, mounted on the frame A, and provided with ratchet wheels H, said ratchet wheels being operated by means of pawls j, on each end of a slide bar I, said slide bar receiving its motion from the main shaft D, by means of the cams c, acting on the lever k, all arranged and operating substantially as shown and described.

No. 29,047.—MINOR H. BACON, of Mystic, Conn.—*Improvement in Machines for Dressing Mill Stones.*—Patent dated July 10, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination of the loose joint B, reversible wiper E, and reversible cutter bar G¹, or their respective equivalents, on the hinged frame A C, so

that the path of the cutters may be adjusted to all the lines required upon the face of the stone, substantially as described.

Second. I claim operating the hook M, or its equivalent, by the same motion which graduates the force of the blow or by a continuation of such motion, substantially as set forth.

Third. I claim reversing the position of the wiper E, and arm G¹, substantially as described, to allow of dressing stones which turn in opposite directions.

No. 29,048.—E. O. BALL, of Greensburgh, Ohio.—*Improved Self-Heating Smoothing Irons*. Patent dated July 10, 1860.—This invention consists in constructing and arranging the several parts of the iron.

The inventor says: I *claim*, first, the arrangement of the pipes F F, the wick tubes *a a*, the wire conductors *c c*, with the partitions H H, on the body of the iron, the same being used substantially as and for the purpose specified.

Second. The arrangement of the flanged lampstand, the lamp provided with tubes F F, tubes *a a*, and partitions *i i i*, the partitions H H, and the dampers *e*, the whole being used substantially in the manner and for the purpose specified.

No. 29,049.—JOHN S. BELCHER, of Albany, N. Y.—*Improvement in Attaching Movable Carriage Tops*.—Patent dated July 10, 1860.—This invention consists in a certain novel means for attaching and detaching a shifting carriage top to the seat rail, whereby the top may be taken off or put on, and also the attachment may be made rigid and secure.

Claim.—The mode of securing shifting carriage tops to their seats by means of the hooks F, eyes E, and the keys or pins G, described, so that the tops can be put on or removed with facility and ease, as set forth.

No. 29,050.—FRANCIS H. BELL, of Washington, D. C.—*Improvement in Hat Ventilators*. Patent dated July 10, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A new article of manufacture, to wit: a portable hat ventilator, consisting of the narrow spring *i*, knobs *m*, anti-absorbent net work O, slotted attaching strips *e*, and buttons *a*, the whole constructed in the manner and for the purpose set forth.

No. 29,051.—JOHN BELL, of Harlem, N. Y.—*Improved Method of Operating the Cutters in Dovetailing Machines*.—Patent dated July 10, 1860.—This invention consists in combining with a rotating cutter a tipping gauge table, when either the cutter or the table has also a rising and falling motion, for the purpose of cutting dovetails.

Claim.—The combination of rotating cutters and a tilting table, when one is made to pass the other vertically, in addition to its other movement, substantially as described, the object being to cut dovetails on wood, as stated.

No. 29,052.—LEVI BISSELL, of North Bergen, N. Y.—*Improved Churn*.—Patent dated July 10, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination and arrangement of the oppositely inclined sets of dasher wings L L, following each other on their respective shafts, while those of one dasher alternate and intermatch with those of the other dasher and the intermediate horizontal dasher wings M M, substantially in the manner and for the purpose specified.

No. 29,053.—CORNELIUS R. BRINCKERHOFF, of Batavia, N. Y.—*Improvement in Harvesters*. Patent dated July 10, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the peculiar construction, location, and arrangement of the back action rake, the gearing, and the mechanism for connecting them, in combination with the driving wheel, platform, and main frame, substantially as described.

Second. The arrangement of the compound elongating levers *ff*, operated by the eccentric on the shaft B, in combination with the platform and the back action rake, or its equivalent, in the manner and substantially as described, for the purpose specified.

No. 29,054.—ABRAM C. BROWN, of Philadelphia, Pa.—*Improvement in Condensers*.—Patent dated July 10, 1860.—The object of this invention is to facilitate the cooling of the vapor rising from the still of distillatory apparatus of any description, and condense the same whilst passing from the still to the worm tub, by keeping the main pipe between the worm tub and still as cool as the worm in the tub, and to accomplish this without the waste of water and in a simple and practical way.

Claim.—The employment of a perforated refrigerating conductor G in combination with the discharge pipe B of the still or retort A, substantially as and for the purpose shown and described.

No. 29,055.—CHARLES F. BROWN, of Warren, R. I.—*Improvement in Wheels for Gun Carriages, &c.*—Patent dated July 10, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Binding the groove *a* with a shoulder *b* of greater depth than the shoulder *c* which binds the other side of the groove *a*, so that a support and guide for the central plate *D* will be provided during the shrinkage of the tire upon the plate, as set forth and described.

No. 29,056.—THOMAS BYRNE, of Baton Rouge, La.—*Improved Method of Cooling Water.*—Patent dated July 10, 1860.—This invention consists in the combination of a subterranean reservoir with a feed pipe and a discharge pipe.

Claim.—The combination of a subterranean reservoir *e* with a feed pipe *b* and a discharge pipe *a* *a*¹, when constructed, arranged, and operated in the manner and for the purpose set forth.

No. 29,057.—GEORGE W. CLARK, of Mt. Washington, Ohio.—*Improvement in Seeding Machines.*—Patent dated July 10, 1860.—The operation of this machine is as follows: The driver, being seated upon the seat *H*, governs the team with one hand, and with the other operates the slide *D*, by means of the lever *E*, so as to drop seed with any desired rapidity as the machine is drawn forward; the harrow, following immediately, covers the seed, and the drag *F* succeeding it operates to effectually pulverize the soil and compact it about the seed.

Claim.—The combination of the harrow *A*, seed box *C*, and drag *F*, constructed, combined, and operating in the manner and for the purposes set forth.

No. 29,058.—GILBERT H. CLEMENS, of Cincinnati, Ohio.—*Improvement in Saw Mills.*—Patent dated July 10, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination of the setting screw *y*¹, clamp nut *w*¹, double eccentric *x*¹, and weighted lever *g*², constructed and operating in connection with the head block of a saw mill, substantially as and for the purposes set forth.

Second. A joint in a saw mill dog near its spike end, or at it, substantially as described, and for the purposes specified.

Third. The arrangement of two or more head blocks with one end of each upon a single carriage sill, and at their opposite ends, each resting upon an independent truck, substantially as described and for the specified purposes.

Fourth. The combination of the levers *m* and *q*, mandrel *c*, steady pins *s*, and adjustable rod *o* *p*, said parts being constructed and operated in the manner and for the purposes set forth.

Fifth. The combination of the conical feed pulleys *f* *u*, lever *f*¹, and pulleys *b* *w* and *z*, constructed and operating in the manner and for the purposes explained.

No. 29,059.—EBENEZER CLEMO, of Toronto, Province of Canada.—*Improvement in the Manufacture of Paper Pulp.*—Patent dated July 10, 1860.—This invention consists in the employment of nitric acid, or the aqua fortis of commerce, in the conversion of straw and grasses into pulp for the manufacture of paper; it also consists in the use, in connection with nitric acid or aqua fortis, of a subsequent treatment with a solution of a hydrate or carbonate of an alkali, for the purpose of reducing the stock to a fine fibrous pulp, without subjecting it to the beating or other mechanical operation.

Claim.—The mode or process of treating straw, and other fibrous substances, in the manufacture of paper stock, substantially as described.

No. 29,060.—JACOB CLOSS and ISAAC N. PYLE, of Decatur, Ind.—*Improvement in Water Wheels.*—Patent dated July 10, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the wheels *F* *D* and their shafts *B* *E* in combination with the openings *e* *e* *l* *l* and gates *m* *o*, as shown and described, so that one or both wheels may be operated as desired, all as set forth.

No. 29,061.—WILLIAM COMPTON, of New York, N. Y.—*Improvement in Bridges for Pianos.*—Patent dated July 10, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the arrangement of the bars *d* *g* and *h*, with their flanges, to form up and down bearings for the strings at the sounding board bridge, in the manner and for the purposes set forth.

I also claim the arrangement of a series of bars, having up and down bearings at the wrest plank bridge, in the manner shown, when such bars are separate from the wrest plank plate and attached to the wrest plank, so as to be removable in sections, in the manner and for the purposes specified.

And I also claim the perforated bar or box *f* or *m*, when combined with an up-bearing rest *4* or *n* and fitted so as to be removed from, or attached to, the wrest plank, for the purposes set forth.

No. 29,062.—G. W. CORSON, of Corson's Post Office, Pa.—*Improved Lath Machine*.—Patent dated July 10, 1860.—This invention consists in having a table or frame containing a circular saw turned by a crank shaft, by which the laths are sawed twice the width required, and the width is regulated by an adjustable guide piece which is attached to the table; at the end of the table is a movable carriage, elevated on an inclined frame to which it is fastened by screws through slots in it, so as to allow it to be adjusted on the inclined block, as desired.

Claim.—The combination of the oblique saw C^1 , the adjustable carriage B on inclined block D, with plane saw C, adjustable guide piece g, shaft S, and band b, operating substantially as and for the purposes set forth.

No. 29,063.—THOMAS COURSER, of Princeton, Ill.—*Improvement in Machines for Binding Grain*.—Patent dated July 10, 1860.—When the pin b in the movable jaw of the nipper stands at the cam m^2 and the curved arm lm, the sheaf of grain should be placed immediately under the knotting apparatus before moving the lever u from right to left, which will enable the horns of the clutch o^1 to retain the cord in forming the loop around them.

Claim.—The knotting apparatus, composed of the several parts specified, when the said parts are constructed and arranged for joint operation in the manner and for the purposes described.

No. 29,064.—JAMES A. DAVIS, of Portsmouth, Va.—*Improvement in Lowering and Detaching Ships' Boats*.—Patent dated July 10, 1860.—This invention consists first, in constructing a trip hook to which to attach boats, of three parts, to wit: a hinge, a catch, and a ring, when the said parts are combined in relation to each other. It consists, in the second place, in the relative arrangement of suspension ropes, trip ropes, pulleys, and trip hooks.

The inventor says: I claim, first, constructing a trip hook for attaching boats to, of three parts, to wit: a hinge, a catch, and a ring, when the said parts are combined and arranged, in relation to each other, in the manner and for the purposes described.

Second. The relative arrangement of suspension ropes $a a^1$, trip ropes $b b^1$, and $c c^1$, pulleys $d d^1 d^2$, and trip hooks $k l m o p$, substantially as and for the purposes set forth.

No. 29,065.—ZINA DOOLITTLE, of Perry, Ga.—*Improvement in Cotton Seed Planters*.—Patent dated July 10, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim, first, the arrangement and combination of the hinged oscillating hopper D, vibrating curved fingers G, and pin wheel B, constructed and operating substantially in the manner and for the purpose specified.

Second. The combination, with the vibrating curved finger G, of the curved slotted seed passage way F, constructed and operating substantially as and for the purpose set forth.

Third. The arrangement of the thumb screw m in combination with the vibrating curved fingers G, operating substantially in the manner and for the purpose described.

No. 29,066.—F. ELDER, of Winnsboro, S. C.—*Improved Mattress and Bed*.—Patent dated July 10, 1860.—This invention consists in an improved method of connecting a mattress immediately with bedstead posts, without the use of bedstead rails, and without the employment of mortises and tenons for uniting the same, while the whole bed is rendered strong, firm, and convenient.

Claim.—The combination and arrangement of the frame A B, strips C, with mattress L, corner notches E, and false posts I, substantially as and for the purpose specified.

No. 29,067.—EZRA EMMERT, of Franklin Grove, Ill.—*Improvement in Seeding Machines*.—Patent dated July 10, 1860.—This invention consists in the novel arrangement and combination of a seed box mounted on two wheels, and having perforations, or seed cells, in its bottom, and a correspondingly perforated slide for contracting said cells so as to regulate the discharge of seed, and of oscillating pendants, or agitators, for preventing the seed from becoming clogged over the seed cells: said agitators being operated by pitmen connected with crank shafts and crank pins on the wheels, and of a guide board and apron attached to the under part of the seed box, to ensure an even and undisturbed distribution of the seed, and in connecting to it a harrow for the purpose of working in, or covering the seed after it has fallen to the ground.

Claim.—The combination, with a seed box A, of the perforated slide E, pendants or agitators d, pitmen e, inclined guide board F, plate or apron G, and harrow H, all arranged and operating substantially as described.

No. 29,068.—JOHN U. FISCHER, of New York, N. Y.—*Improvement in Piano Fortes*.—Patent dated July 10, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim, first, the arrangement of the strings in the triangular form specified, for balancing the strain on the metallic plate, as set forth.

Second. I claim the metallic plate *g*, and sounding board *m*, connected together at the edges of the openings for the hammers by the ribs or strips 4 4, when the length of string is determined by bridges at each end that rest on the sounding board and pass through openings in said plate *g*, as specified.

Third. I claim forming the base or bottom *e* of the piano of the wooden cross-pieces or sills within the wooden surrounding frame, in combination with the metallic plate *f*, screwed on to the bottom of the instrument, for the purposes described and shown.

Fourth. I claim the openings 1 1, in the bottom of the piano, to afford access to the nut 2, or fastenings for attaching the legs *c c*, substantially as specified.

No. 29,069.—JOHN FITCH, of Seneca Falls, N. Y.—*Improvement in Filters*.—Patent dated July 10, 1860.—The water, or liquid, to be filtered, is let upon the top of the cylinder *E*², and passing down said cylinder and through the pipe *D* into the cylinder *B*¹, and up through the filtering material contained therein, is drawn from the faucet in a purified state.

Claim.—The filter, when constructed, arranged and operated in the manner and for the purposes set forth.

No. 29,070.—RUSSEL FRISBIE, of Middletown, Ct.—*Improved Bench Hook*.—Patent dated July 10, 1860.—This invention consists in so arranging its several parts as to be adapted to tall benches. The cam lever *B* is hinged to a case or stand *F*, which is connected to the upper case *c*, and fastened to the underside of the bench.

Claim.—The cam lever, in combination with the case and bench hook, substantially as described.

No. 29,071.—JOHN S. GAGE, of Dowagiac, Mich.—*Improvement in Seeding Machines*.—Patent dated July 10, 1860.—This invention consists in an improved arrangement of seed distributing device, rollers, and coverers, whereby the seed may be planted and covered.

Claim.—The combination of the rollers *B*, with the seed boxes *D E*, and coverers *J*, arranged for joint operation, as and for the purpose set forth.

No. 29,072.—R. J. GATLING, of Indianapolis, Ind.—*Improved Lath Machine*.—Patent dated July 10, 1860.—This invention consists in the use of a cutter, or knife bar, and a bolt bar attached to eccentrics, so arranged relatively to each other that the two bars will have an oblique reciprocating movement toward and from each other. It also consists in a peculiar means of applying the power of the knife and bolt bars, whereby the stroke or movement of the same may be varied as occasion may require.

The inventor says: I *claim*, first, the employment or use of the two obliquely reciprocating bars *F G*, provided respectively with the bolt *I*, and knife *J*, and operated substantially as, and for the purpose set forth.

Second. The arrangement of the slotted arm *M*, rod *O*, and adjustable frame *P*, substantially as shown, to vary the length of stroke or movement of the bars *F G*, for the purpose specified.

No. 29,073.—LE ROY C. GILLASPIE, of Denmark, Tenn.—*Improvement in Harrows*.—Patent dated July 10, 1860.—This invention consists of a metallic side harrow head, open at the front and rear, and having a central oblique, or diagonal slot *c c*, and openings *e e*¹, in combination with a plough beam.

Claim.—A metallic side harrow head *a b d d*, open at front and rear, and having a central oblique or diagonal slot *c c*, and openings *e e*¹, in combination with a plough beam, substantially as and for the purposes set forth.

No. 29,074.—HENRY GLOVER, of East Douglas, Mass.—*Improvement in Wind Mills*.—Patent dated July 10, 1860.—In order to set the slats of the wind sails at any desired angle to regulate the speed of the parts in a high wind, it is only necessary to pull the rod *R*, when the collar *P*, through which the spindle *B* turns loosely, will draw down the bent arm *N*, move the arm *M* in the direction of the vane *F*, and clutch the plate *I* of the shaft *H* with the fixed plate *I*, and disengage the shaft *H* from the hollow shaft *G*. The chains *e* of the slats are then wound around the fixed shaft *H* until the slats are entirely open, when the wind will cease to have any effect on the parts, and the mill will stop.

Claim.—The arrangement and combination of the fixed disk *I*¹, with the rotating horizontally sliding disk *I*, arms *k*, shafts *G H*, sails *J*, lever *M*, rod *N*, sliding collar *P*, and rod *R*, as and for the purpose shown and described.

No. 29,075.—HORACE P. HAWKINS, of Akron, Ohio —*Improvement in Hay Racks for Carts*.—Patent dated July 10, 1860.—This rack is composed of bottom or base pieces *D D*, arms *B B*, and top pieces *C C*. The arms *B B* are rigidly secured at their lower ends to the base

pieces D D, and are also hinged together, as shown at F. The top pieces C C are provided with eyes or staples e.

Claim.—A removable folding hay rack for carts or wagons, constructed and operating substantially, as set forth.

No. 29,076.—JOHN P. HENDERSON, of Franklin, La.—*Improvement in Arrangement of Sugar Kettle Trains.*—Patent dated July 10, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A range of kettles on double arches B B, supported partly upon centre pins or pillars C C between the kettles, substantially as and for the purpose specified.

No. 29,077.—DANIEL HESS, of West Union, Iowa.—*Improved Carpet Sweeper.*—Patent dated July 10, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement of the bellows D with the water chambers F F and the brush C, the same being used and made to operate substantially as and for the purpose specified.

Second. The arrangement of the pipes c c b b d d and G with the bellows D, brush C, and water chambers F F, whereby dust is drawn into the machine and submerged in water, substantially as specified.

No. 29,078.—GEORGE HETRICK, of Reidsburgh, Pa.—*Improvement in Seed Planters.*—Patent dated July 10, 1860.—This improvement consists in the arrangement of the different parts of the machine.

Claim.—The arrangement of the standards D D, axle B, wheels A, with spikes C C¹, and castor wheel O; the whole being constructed and arranged for joint operation substantially as described.

No. 29,079.—ENOCH HIDDEN, of New York, N. Y.—*Improved Side Lights for Ships.*—Patent dated July 10, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The employment on a hinged or swinging ship's light of a spring catch bar, in combination with a locking screw or its equivalent; the two arranged to operate substantially as described for the purposes set forth.

No. 29,080.—B. B. HOTCHKISS, of Sharon, Conn.—*Improvement in Cartridges.*—Patent dated July 10, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the compound cartridge case A B, composed of metal and cloth, or other soft material, combined substantially in the manner described, so as to be removed from the gun by the explosion of the powder, and also to sponge the gun in its passage through the bore, substantially as specified.

Second. A metallic cartridge case with a strong front end and a weak back, for the purpose of causing it to be blown out of the gun by the explosion of the charge.

Third. Radially dividing the metal of the back end of the cartridge case and joining it by weak solder, substantially as and for the purpose described.

Fourth. The block D of wood, or other suitable material, in the forward end of the cartridge, for the purpose of strengthening the end of the case A, and giving momentum to the structure, substantially as described.

Fifth. Extending the covering D over the front end of the case A, substantially as and for the purpose set forth.

No. 29,081.—G. HENRY HULSKAMP, of Troy, N. Y.—*Improvement in Piano Fortes.*—Patent dated July 10, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the use of a strained sounding board in piano fortes, whether made of wood, metal, or other material, substantially as described.

Second. I claim the same when made to counteract the tension of the strings, substantially as described.

Third. I claim the oblique sounding posts or braces, or the continuous curved sounding bridge or board, whereby the vibrations of the strings are transmitted to near the middle part of the sounding board, substantially as described.

Fourth. I claim the extension of a wooden hitch board, made thick with different pieces of wood, as described, nearly to the sounding board bridge, in combination either with a sounding board bridge (the frame extending no further than the sounding board bridge) or a sounding board below the frame, or both, for the uses and purposes set forth.

Fifth. I claim the mode set forth of strengthening the piano forte by making the iron brackets K K K K bear not only against the iron plate on the upper side, but also against an iron plate through intermediate bars on the underside, and connecting that iron plate with the top plate by the iron bolts J J, substantially as described.

Sixth. I claim the construction of the bridge L and the agrafe Fig. 4, substantially as described, or making the bridge L of soft metal, in the manner as the agrafes.

No. 29,082.—A. R. HURST, of Chambersburgh, Pa.—*Improvement in Horse Hay Rakes*.—Patent dated July 10, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, providing each of the rake teeth *h e* with an adjustable weight *k*, substantially as and for the purposes set forth.

Second. Combining two levers *d o* with a lever *d* and a ratchet bar *c* for the purpose of operating the rake teeth *h e*, substantially as set forth.

Third. Making the weights *k* adjustable by hinging them to one of the bearers *d*, substantially as and for the purposes set forth.

Fourth. So arranging and combining the bearers *d o*, rake teeth *h e*, and weights *k*, that one lever answers for regulating the weight upon each rake tooth, and for elevating the rake teeth above the ground, as set forth.

No. 29,083.—BENJAMIN IRVING, of New York, N. Y.—*Improvement in Syringes*.—Patent dated July 10, 1860.—The claim and engravings explain the nature of this invention.

Claim.—As an improved article or manufacture, a syringe, for the cure of internal hemorrhoids, that is provided with an enlargement B for the reception of the ointment, a screw plunger C to fit said enlargement, a holding wire D, and discharge tube A; the whole constructed as shown and described.

No. 29,084.—BENJAMIN A. JENKINS, of White Water, Wis.—*Improvement in Harvesters*.—Patent dated July 10, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, a toothed rake arm *a*, pivotted at one end and actuated by two springs *j k*, cord *m*, and lever *n*¹, so as to move in an arc of a circle in a plane parallel to a platform, and also to turn on its own axis, in combination with a spring plate *c*, forked deflectors *h h*¹, slotted platform *g*, and cutters *i i*¹, in the manner and for the purpose described.

Second. Arms *m*¹, pivotted at the lower end, in combination with stirrups *l*¹, supporters *k*¹, cord *v*, pulleys *r*¹ *r*¹, perforated crank shaft S, and ratchet *u*, for the purpose of operating the two arms *m*¹ simultaneously, and thereby to elevate or depress the reel, in the manner and for the purpose described.

Third. The arrangement of the reel-supporting bar *k*¹ so that its fulcrum is behind the driving wheels, and always in line with the centre of the pulleys *c*¹ *d*¹, in combination with the pivotted arm *m*¹, in the manner and for the purpose set forth.

No. 29,085.—CORNELIUS R. KETCHUM and W. L. HUNT, of Port Jefferson, N. Y.—*Improvement in the Construction of Centre Board Vessels*.—Patent dated July 10, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The keelson log J, introduced between the keel and keelson, substantially in the manner and for the purposes set forth.

No. 29,086.—JOHN K. LEWIS, of Rising Sun, Ind.—*Improvement in Supporting Scaffolds*.—Patent dated July 10, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Elbow-jointed reversible extension brackets for sustaining staging of scaffolding on two or more ordinary ladders, as set forth in the above specification.

No. 29,087.—JOSEPH B. LIVEZY, of Clarksboro', N. J.—*Improvement in Cultivators*.—Patent dated July 10, 1860.—This invention consists in the arrangement and combination of a sliding head with the side wings, operated with a hand lever and fastened to both wings in front, together with two pivotted links, which connect the rear parts of said wings to the beam in such a manner that the said wings, on being expanded or contracted receive, at the time a longitudinal sliding motion.

Claim.—The arrangement of the sliding cross head D, pivotted links E, and hand lever F, in combination with the side wings C and beam A, constructed and operated substantially as and for the purpose specified.

No. 29,088.—J. R. LONNSBERRY, of New England Village, Mass.—*Improvement in Hooks for Watch Chains*.—Patent dated July 10, 1860.—This invention consists in the use of a jointed elliptical ring, or two elliptical bows, jointed together in a suitable manner, one of which is securely attached to the end of a hollow stem, while the end of the other is attached to the hollow stem by an eye-shaped head pin and movable slotted tube that works within the stem, said tube being rotated by a thumb ring so that the movable jointed bow may be opened and passed through a button hole, and then closed and secured fast by a single turn of the thumb ring.

Claim.—The jointed bow *d*, with its tongue *g* and the slotted portion *h*, for locking the end of the bow to the stem, substantially as and for the purpose specified.

No. 29,089.—WILLIAM N. MANNING, of Salem, Mass.—*Improved Planing Machine.*—Patent dated July 10, 1860.—This invention consists in placing radially within a rotating cutter head a series of rotating cutters, whereby the cutters have two movements, to wit: an independent rotating one on their own axis, and the one produced by the rotation of the head in which they are placed.

Claim.—The combination of the rotary cutters *c* and rotating disk *G*, arranged to operate as and for the purpose set forth.

No. 29,090.—JOHN W. MASURY, of New York, N. Y.—*Improved Paint Can.*—Patent dated July 10, 1860.—*A* represents a can made of tinned sheet iron. The top edge of this can is strengthened by a bead *a*, formed with or without a wire. *B* is a solid cover of wood or any other rigid material. The cover is fastened down by two or more straps *C*.

Claim.—The combination, in the manner shown and described, with the wooden cover *B* and the head of the can *A*, of the hook-shaped straps *C*, for the purpose set forth.

No. 29,091.—SIMON H. MIX, of Schoharie, N. Y.—*Improved Process for Making Stereotype Plates.*—Patent dated July 10, 1860.—The claim explains the nature of this invention.

Claim.—The use of foil of tin, or other metal, upon the face of the type form to be stereotyped, and interposed between it and the matrix or mould for the stereotype plate, in the manner and for the purposes described.

No. 29,092.—N. Q. MUNGER, of Brookfield Centre, Wis.—*Improvement in Œsophagus Tubes.*—Patent dated July 10, 1860.—The claim and engravings explain the nature of this invention.

Claim.—An instrument for the relief of choke and bloat, having a hollow tube *A*, with a flaring mouth piece *b* and with an egg-shaped perforated bulb *c*, constructed and operating substantially as and for the purpose described.

No. 29,093.—RICHARD MURDOCH, of Baltimore, Md.—*Improvement in the Running Gear of Vehicles.*—Patent dated July 10, 1860.—This invention relates mainly to the mode of bracing the short axles so as to give them firm support in every position, and also to a mode of supporting the king bolts and attaching the springs to the axletree, and relieving the sliding pivot or bolt from wear.

The inventor says: I *claim*, first, the combination of the curved braces *F F* with the bed *C* and plates *H H*¹, substantially in the manner and for the purpose described.

Second. The combination, with the bolt *n*, of the slide piece working in the slot *o*, in the manner and for the purpose specified.

No. 29,094.—HARRISON OGBORN, of Greenfork, Ind.—*Improvement in Cultivators.*—Patent dated July 10, 1860.—This machine is constructed with four ploughs *U U V W*, which are attached to beams *A B C D* by means of sheaths or foot pieces *x x*; these beams are attached to the cross piece *E* in front, which sustains the weight of the beams and ploughs, and are connected to it by staples *R*.

Claim.—The arrangement of the spring bolts *K K*, the piece *H*, staple *B*, and movable seat *M*, in combination with the ploughs *U U* and *V W*, the whole being arranged, constructed, and operated substantially as set forth.

No. 29,095.—S. E. OVIATT, of Richfield, Ohio.—*Improvement in Threshing Machines.*—Patent dated July 10, 1860.—This improvement relates to a certain arrangement of devices, by which the dust caused by a threshing machine when at work is conveyed off with the chaff.

Claim.—The arrangement of the pipes *C C*¹ and *F*, and flue *H*, in combination with the revolving screen *J* and valve *P*, substantially in the manner and applied to the purposes described.

No. 29,096.—W. H. PAINE, of Sheboygan, Wis.—*Improved Surveyors' Tackle Case.*—Patent dated July 10, 1860.—This invention consists of a tape divided into yards, feet, links, or some other unit of measurement, a set of pins, usually ten in number, a thermometer, two peculiar rings or handles for the ends of the tape when it is in use, and an index plate, for indicating the tally. The whole arrangement is to be combined and put compactly in a box or case.

Claim.—The surveyors' measuring tackle case, constructed of any suitable material, essentially in the manner and for the purposes set forth.

No. 29,097.—GEORGE M. PHELPS, of Troy, N. Y.—*Improvement in Pendulum Clocks*.—Patent dated July 10, 1860.—The claim and engravings explain the nature of this invention.

Claim.—So mounting two vibrative pallets upon the pendulum of a timekeeper that, in the oscillations of the pendulum, the axis or centre of vibration of each pallet will be carried to, nearly to, or past, a line drawn from the axis or centre of oscillation of the pendulum, through the point where the swing wheel bears on the pallet, substantially as set forth.

No. 29,098.—NATHANIEL POTTER, JR., of South Dartmouth, Mass.—*Improvement in Apparatus for Protecting Trees from Insects*.—Patent dated July 10, 1860.—This invention consists in an improved construction of the trough A; also, in combining with the trough and its covering a lamp and reflector, to throw a circle of light around the trough, to attract such insects into it as may fly at night and are destructive to the fruit.

The inventor says: I *claim*, first, the flange g on the trough A, substantially as described, for the purpose specified.

Second. I claim the combination, with the hood D and trough A, the lamp E and reflector G, arranged and operating substantially in the manner and for the purpose specified.

No. 29,099.—JOHN H. POWER, of Middletown, Iowa.—*Improved Broom or Brush*.—Patent dated July 10, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the brush fibres or broom corn between the screw of the handle and the inner surface of the hollow head, as shown and described, so that the said fibres will, by the pressure consequent upon introducing the screw into and among the said fibres, cause the latter to press into and fill the threads of the screw, and thus hold the handle firmly to the broom or brush, all as set forth.

No. 29,100.—JOHN PRICE, of Harrison, Ohio.—*Improvement in Corn Planters*.—Patent dated July 10, 1860.—This improvement relates chiefly to the arrangement for elevating the markers, coverers, and rollers, and to the arrangements for dropping the seed.

The inventor says: I *claim*, first, the arrangement of the hinged frames E and F in combination with the main frame, the levers K and L, the shovels G, the coverers H, and rollers I, the whole being arranged and operated substantially as set forth, for the purposes described.

I also claim the combination of the bar U, cams V, spring Z, arms T, shaft S, and seed cup n, arranged substantially as set forth, for the purposes specified.

No. 29,101.—GEORGE M. RAMSAY, of New York, N. Y.—*Improved Machine for Sweeping Streets*.—Patent dated July 10, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the manner of attaching and detaching the frame e, brushes g and k, pinion h, and apron J, to and from the axle d.

I also claim the revolving dirt box c, when in combination with frame e, and its appurtenances, as described.

No. 29,102.—EDWIN RITSON, of Sanbornton Bridge, N. H.—*Improvement in Seeding Machines*.—Patent dated July 10, 1860.—This invention consists in combining in one machine, in a novel manner, the operation of forming ridges in the surface of the soil for receiving the wheat, sowing the wheat, and harrowing and rolling the same.

Claim.—The combination of castor wheel C, wheels g, and the seeding arrangement, with rotary harrow and roller B, all arranged relatively with each other to effect the objects in the manner set forth.

No. 29,103.—MILTON ROBERTS, of Worcester, Mass.—*Improved Lathe*.—Patent dated July 10, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* arranging one or more shaping or moulding tools, in one piece or in parts, on an oblique bar in a reciprocating gate which moves transversely of, and at right angles with, the piece to be turned, in the manner and for the purpose specified.

I also claim, in combination with the middle chuck, two reciprocating gates, in the manner and for the purpose set forth.

I also claim the application of the hollow universal chuck, or its equivalent, in the manner and for the purpose set forth.

No. 29,104.—HENRY H. ROBERTSON, of Kingston, Mo.—*Improvement in Ploughs*.—Patent dated July 10, 1860.—This invention consists in the arrangement of a hinged plough, vertical adjusting screw, carriage, segment guide frames, toothed segmental adjusting bars, and cog pinion, and pawl, or stop.

Claim.—The arrangement of a hinged plough F, carriage A A¹ B, vertical adjusting screw d, segment guide frames E, toothed segmental adjusting bars i j, cog pinion k, pawl o, or stop m, substantially as and for the purposes set forth.

No. 29,105.—WILLIAM SCHNEBLY and THOMAS SCHNEBLY, of Hackensack, N. J.—*Improvement in Horse Rakes.*—Patent dated July 10, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim* the arrangement of the axis bar d of the swinging frame E, between the axis of the wheel B B and the traverse bar d, as shown and described, so that the rear ends of the bars b b will be supported against the inward pressure of the wheels, all as set forth.

We also claim the arrangement of the wheels B B and their axis upon the extremities of the said bars b b, which carry the swinging frame, whereby the employment of an axle tree extending from wheel to wheel is avoided, and the inside of the frame is left entirely open for the unobstructed operations of the rake, all as represented and described.

No. 29,106.—FRANCIS SCHWALM, of Joliet, Ill.—*Improvement in Stone Dressing Machines.* Patent dated July 10, 1860.—This invention consists in the use of a sliding eccentric, connected with a bar, in which a series of chisels are fitted, the chisels being provided with a rack, and all the working parts being fitted in sliding frames, so arranged as to admit of the perfect adjustment of the chisels and a proper adaptation to their work.

The inventor says: I *claim* the employment or use of the sliding eccentric I, connected with the chisel bar K, and arranged to operate as and for the purpose set forth.

I also claim, in connection with the eccentric I and chisel bar K, the adjustable guide bar Q, for the purpose specified.

No. 29,107.—FREDERICK SEIDLE and SAMUEL EBERLY, of Mechanicsburg, Pa.—*Improved Machine for Bending Wood.*—Patent dated July 10, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim*, first, the combination of a revolving yielding pressure pattern with an unyielding sliding bed, arranged substantially as described, for the purpose set forth.

Second. Attaching the pattern to the frame, substantially as described, so that it can be removed by simply drawing it out without unloosing any bolts.

No. 29,108.—CHRISTIAN SHARPS, of Philadelphia, Pa.—*Improvement in Packing Cartridges.* Patent dated July 10, 1860.—This invention consists in a process of packing the hollow collars of metallic cartridges with detonate, by means of a wad of a peculiar form, and applied in a novel manner, so that the detonate may be conveyed to the hollow collar, as well as packed into and confined therein.

Claim.—The process of packing the hollow collars of metallic cartridges with detonating powder, by means of a wad d, of a form substantially as specified, and applied substantially in the manner and for the purpose set forth.

No. 29,109.—JAMES T. SMITH, of Portsmouth, Va.—*Improvement in Cranes.*—Patent dated July 10, 1860.—This invention consists in the use of a diagonal brace, with a wheel, which runs on or against an annular way on a platform of the crane, in connection with wheels attached to a horizontal arm of the mast below the platform, and which wheels run in contact with the under side of the mast.

Claim.—The brace E, attached to the upright beam or mast C and provided with the wheel F which runs on or against the annular way G on the platform A, in connection with the rollers b b on the cross bar H bearing against the under side of the platform A, substantially as and for the purpose set forth.

No. 29,110.—JOHN A. C. J. SMITH, of Philadelphia, Pa.—*Improvement in Pumps.*—Patent dated July 10, 1860.—A represents a hollow cast metal sphere which forms the body or chamber of the pump; this body or chamber is formed of two equal parts, connected together by bolts, which pass through proper flanches cast with the parts.

Claim.—The employment of the spherical shell A in combination with the rounded partition E E¹ and rounded piston H, as and for the purpose shown and described.

No. 29,111.—WILLIAM STEPHENSON, of Galion, Ohio.—*Improvement in Gas Pipes.*—Patent dated July 10, 1860.—This invention consists in employing wood gas pipes instead of metal pipes, and coating the inside of the pipes with a composition of sulphur and graphite, or its equivalent, for the purpose of preventing leakage.

Claim.—A wooden gas pipe A coated on the inside with a composition of graphite and sulphur, or its equivalents.

No. 29,112.—ELBRIDGE G. STEVENS, of Biddeford, Me.—*Improvement in Syringes*.—Patent dated July 10, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, a sheath or retainer, having a lip or flange, so as to embrace and compress the external parts with which it comes in contact, said lip being on its periphery and curved upward, and its internal parts *l*, so shaped as to fit when pressed between the labiæ, and also to penetrate the vagina, said sheath being also fitted with a valve, or its equivalent, and said sheath being used either above, or in combination with, a syringe of any description.

Second. I claim the tank *a a*, plunger *b*, tubes *i* and *f*, spring *x*, and spring *e*, when combined and arranged substantially as and for the purposes specified.

No. 29,113.—ANTHONY STRATTON, of Brooklyn, N. Y.—*Improvement in Flexible Joints for Gas Tubes*.—Patent dated July 10, 1860.—This invention consists in suspending the pendant burner tube to the main tube by means of a chain, or its equivalent, to obtain a secure and flexible connection, and covering the ends of the tubes or their sockets with a tube of India rubber, or other similar substance, to form a gas-tight connection.

Claim.—The chain *C*, or its equivalent, in connection with the India rubber or other flexible tube *D*, applied to the sockets *A B*, substantially as and for the purpose set forth.

No. 29,114.—SEWALL P. TOLMAN and NATHANIEL F. BLODGETT, of North Orange, Mass.—*Improvement in Tuyeres*.—Patent dated July 10, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The improved tuyere, as constructed, with a valve opening *h* and valve *k*, arranged on or applied to the air case, so that the said valve shall not only close upon the opening by the force of the blast from the induction pipe, but, on cessation of the blast, move away from such opening and permit air to enter the case and pass from thence into the mass of fuel.

No. 29,115.—J. J. UMBEHAZEN, of Baton Rouge, La.—*Improvement in Apparatus for Draining Sugar*.—Patent dated July 10, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination of a cooler *C*, with an air tight hinged case *B*, constructed and operating substantially in the manner and for the purpose specified.

Second. Arranging the cooler *C*, with double walls, viz: the perforated inner wall *c*, and the air tight inclosure *f*, constructed and operating substantially in the manner and for the purpose described.

Third. The arrangement of the perforated conical tube *D*, in combination with the cooler *C*, substantially as and for the purpose set forth.

No. 29,116.—LEONARD WHITE and ICHABOD JEWETT WHITE, of Buffalo, N. Y.—*Improvement in Skates*.—Patent dated July 10, 1860.—This improvement relates to the construction and manner of fastening a skeleton skate runner to its wood.

Claim.—The hook *G*, projecting from the stud *F*, of a skeleton skate runner, in combination with the screw lock *H*, for the purposes and substantially as set forth.

No. 29,117.—S. B. WILKINS, of Milton, Pa.—*Improved Spoke Machine*.—Patent dated July 10, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the rocking clamp, consisting of the lever shaft *E*, lever *F*, and adjustable plate *I*, operating as set forth and for the purposes described.

No. 29,118.—THOMAS F. WOODWARD, of South Reading, Mass.—*Improved Signal Lantern*.—Patent dated July 10, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the portable signal apparatus for vessels, substantially as described, the same consisting of a lantern, or its equivalent, for producing a constant light, with which is combined an apparatus for instantaneously producing a report, or an alarm, and an intense pyrotechnic light, as set forth.

Second. In combination with the igniting and discharging apparatus, the cover *n n*, so operated as to be instantaneously thrown open when the contents of the barrels are ignited, and serving to protect the same from exposure to dampness, &c., as set forth.

No. 29,119.—JOHN M. BOWMAN, of Brockport, N. Y., assignor to HUNTLEY BOWMAN & Co., of said Brockport.—*Improvement in Harvesting Machines*.—Patent dated July 10, 1860. This invention relates to the mode of forming and combining the finger bar and the guard finger, to the manner of constructing the cutter bar, the mode of clearing the cutting apparatus of any obstructing matter, and to a mode of depositing the cut grain when the machine, to which it may be applied, is used to harvest grain.

The inventor says: I *claim*, first, a cutter bar with acute angular notches on the back thereof, for the purpose and substantially as described.

Second. The finger beam and guard fingers when constructed, connected, and operating in combination, in the manner and for the purposes specified.

Third. The cutter bar with its acute angular notches on the back thereof, in combination with the projections on the shank of the guard finger, made and operating substantially as described.

Fourth. The second or dumping platform *a*, in combination with the mechanism for operating it, and with the first platform, constructed and arranged in the manner and for the purpose substantially as described.

No. 29,120.—CHILTON F. BROWN, of Bridgeport, Conn., assignor to himself and JOSIAH BAXLIES, of said Bridgeport.—*Improved Lock*.—Patent dated July 10, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the sliding cam B, with the bevelled end of the latch C, in such a manner that the latch is raised and the door or window opened by the continuation of the same motion or impulse.

No. 29,121.—JOHN CONTRELL, of New York, N. Y., assignor to himself and JOSEPH CONTRELL, of said New York.—*Improved Washing Machine*.—Patent dated July 10, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The employment of the rack sectors J J¹, and intermediate oscillating pinion K, gearing with both of said sectors, in combination with the oscillating rubbing tub B, and conical rubber D, as and for the purposes shown and described.

No. 29,122.—JOHN SPERRY, of New York, N. Y., assignor to himself and CALVIN W. SHERWOOD, of said New York.—*Improved Tool for Enamelling Picture Frames, &c.*—Patent dated July 10, 1860.—This invention consists in the employment of cylindrical rollers constructed and shaped with reference to the size and shape of the moulding they are intended to be used upon, said rollers having handles projecting from each end that guide them in their movements over the moulding, and also by which they are rolled and controlled.

Claim.—A cylindrical roller having the form of the surface to be enamelled made in bas relief around its circumference, substantially in the manner and for the purposes set forth.

No. 29,123.—S. A. CORSER, of Northampton, Mass., assignor to himself and J. A. NIMS, of said Northampton.—*Improvement in Moulds for Casting*.—Patent dated July 10, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the employment of a mould carriage that moves in a circle, in combination with the compression plungers L M, substantially as and for the purpose shown and described.

I also claim the employment, in combination with the flasks N Q, of pistons L M, that have their faces shaped to correspond with the form of the article to be moulded, so that the compression of the sand within the flask will be equal in every part, as set forth.

I also claim the employment of the supplemental moulds P P, in combination with the pistons L M, and flasks N Q, as and for the purposes shown and described.

No. 29,124.—ERASTUS CROOKER, of Buffalo, N. Y., assignor to himself and JEFFERSON T. UPSON, of said Buffalo.—*Improvement in Vapor Lamps*.—Patent dated July 10, 1860.—This invention consists in the construction and relative arrangement of its different parts.

Claim.—The arrangement of the fluid pipe K, converging chambers *d* and *e*, screw tops *f* and *g*, recess *f*¹, and gas pipe *h*, as and for the purposes set forth.

No. 29,125.—HARRY H. EVARTS, of Chicago, Ill., assignor to himself and PHINEAS T. MERRIHEW, of said Chicago.—*Improved Machine for Sawing Staves*.—Patent dated July 10, 1860.—This improved machine is intended to saw staves from the block with a circular saw. The staves thus produced require to be planed to the proper form for the market, or for use.

Claim.—The combination of the vibrating and reciprocating carriage with the circular saw, as described, and for the purposes set forth in the specification.

No. 29,126.—A. J. GIBSON, of Worcester, Mass., assignor to himself and J. P. HALE, of said Worcester.—*Improvement in Revolving Fire Arms*.—Patent dated July 10, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* so applying a so constructed cylinder, in combination with a so constructed frame, that when the frame is opened the cylinder remains attached to and

swings with the front part of the frame and the barrel, substantially as and for the purpose specified.

And I also claim the construction of the hinge jointed cylinder frame with chambers in its front and rear ends to receive and cover the front edges of the cylinder, substantially as and for the purpose specified.

Also the recess or chamber *k*, in the front or forward end of the cylinder.

No. 29,127.—JOSEPH HINMAN, of Watertown, Mass., and D. S. FRENCH, of Marietta, Ga., assignors to themselves and NATHAN KING, of Middlesex, Mass.—*Improvement in Cotton Cultivators*.—Patent dated July 10, 1860.—This invention consists in the use of a series of runners or plates provided with cutters, or shares, and attached to a suitable framing a requisite distance apart, and in such a way that a certain degree of vertical adjustment will be allowed them, and the plants thinned out by the cutters by drawing the implement transversely over the drills in which the plants are growing.

The inventors say: We *claim*, first, the employment or use of a series of plates *B*, provided with cutters *C*, and attached to a frame *A*, substantially as shown, for the purpose set forth.

Second. Attaching the cutters *C* to the plates *B*, by means of tangs *h*, secured by set screws in semi-circular bars *g*, on the plates directly over slots *f* therein, as and for the purpose specified.

No. 29,128.—CHARLES KINSLER, of New York, N. Y., assignor to himself and J. H. VOSS, of said New York.—*Improvement in Apparatus for Washing Bone Black*.—Patent dated July 10, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement and construction of a triangular box, turning on its axis for the purpose of washing animal coal, when said box is provided with internal flanches, forming a spiral screw, in the manner substantially as specified.

Second. The general construction, combination, and arrangement of the washing machine, as shown and described, so as to operate substantially in the manner and for the purpose set forth.

No. 29,129.—JOHN H. RIBLE, of Somerset, Ohio, assignor to JACOB W. BOPE, of St. Louis, Mo.—*Improvement in Harvesting Machines*.—Patent dated July 10, 1860.—This invention relates to certain improvements in corn harvesting machines, with mechanism for binding and discharging the corn in shocks or sheaves set on end.

The inventor says: I *claim*, first, in combination with the main frame and gearing for operating the cutter and reel, the elevating and dumping platform, the parts being arranged and operating in the manner and for the purposes specified.

Second. The combination of the mechanism for binding, elevating, and dumping the shock substantially as described.

Third. The revolving platform *K*, in combination with the cutting apparatus and elevating mechanism, constructed, arranged, and operated in the manner described, for the purposes specified.

No. 29,130.—JAMES C. COOKE, of Middletown, Conn., assignor to himself and D. C. SAGE of said Middletown.—*Improved Machine for Cutting Files*.—Patent dated July 10, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the attachment of the chisel stock, at two points, to two vibrating rods *G G*, by which it is made to receive a movement of a character, substantially as specified, for the purpose of throwing up the cut.

Second. Providing for shifting the two fixed centres *d d*, on which the vibrating rods *G G* work, for the purpose of giving the chisel a greater or less degree of horizontal movement, by means of a movable plate *N*, or its equivalent, so applied as to provide for the raising and lowering of said centres.

Third. The construction of the chisel stock of two parts *F F*¹, one of which is capable of a rolling or oscillating movement substantially as and for the purpose specified.

Fourth. Providing for controlling the force applied to the chisel, so that it shall be always in proportion to the varying width of a file blank, by means of a compound cam *K l*, applied and governed substantially as described, to give a greater or less lift to the chisel or hammer according as the width is greater or less at the part presented to the chisel.

Fifth. The combination of the single chisel-edged dog *r* applied to the point of the blank, and the double or grooved chisel-edged dog *S* applied to the heel of the blank, substantially as specified.

Sixth. The employment, for holding down the file blank at the time of the operation of the chisel, of a presser which possesses sufficient elasticity in a proper direction to enable it to adapt itself to the varying thickness of the blank and to blanks of different thicknesses, and which is raised from the blank before, and kept raised during, the feeding operation, substantially as set forth.

Seventh. Making the guide or guides for the file carriage D adjustable around the axis of a feed pinion gearing with a rack formed upon or attached to the said carriage, substantially as and for the purpose specified.

Eighth. So combining a clutch lever, by which the driving pulley or gear may be uncoupled from the main shaft of the machine, with an adjustable wedge attached to the file carriage, substantially as described, that the said wedge may be made to act upon the said lever to uncouple the pulley or gear at such point in the movement of the carriage as may be desired.

No. 29,131.—G. W. N. YOST, of Cincinnati, Ohio, assignor to G. W. N. Yost & Co., of Yellow Springs, Ohio.—*Improvement in Harvesters of Corn and Sugar Cane.*—Patent dated July 10, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination of the knife B with its supporter A, when arranged in relation to each other and to the side of the main frame, as described, whereby the opening *f* is provided at the heel of the knife, in the manner and for the purpose specified.

Second. The combination and arrangement of the knife B, drum E, and arms D, guards F, endless chains J, and inclined platform I; the whole operating substantially as described, for the purpose of cutting corn stalks or cane and carrying the same to the rear of the machine when cut.

No. 29,132.—JOHN N. ARVIN and SAMUEL H. PERKINS, of Valparaiso, Ind.—*Improvement in Axle Trees.*—Patent dated July 17, 1860.—The inventor says: In using this machine place a straight edge on the rests A, extending through the rings B, lower the set screws d^1 as much below the straight edge as you wish to give pitch to the axle; set the lateral set screws d^2 , by the assistance of the straight edge, a sufficient distance back to give the desired gather; heat the axle tree at the shoulders, place it on the rests A, the ends extending through the rings B; then fasten the axle tree at A with the set screws d^1 , then turn the set screws in the rings B until the points of the axle come in contact with the set screws $d^1 d^2$.

Claim.—An improved mode of setting axle trees and giving them the required pitch and "gather," by means of metallic set screws, rests and sets, or their equivalents, as exhibited and described by the specification.

No. 29,133.—SAMUEL BARNET, of Washington, Georgia.—*Improved Plotting Instrument.*—Patent dated July 17, 1860.—This invention consists in combining a protractor, graduated rule, and T square, in one and the same instrument, by the simple adjustment of which both the direction and length of any given line can be readily obtained without calculation.

Claim.—The instrument, constructed essentially as described and represented, combining a protractor, graduated rule and T square, arranged in such a way that the adjustment of the protractor adjusts the rule.

No. 29,134.—G. T. BENNETT, of Mt. Olive, N. C.—*Improvement in Seed Planters.*—Patent dated July 17, 1860.—In operating this machine, peas being placed in the hoppers A, it is put in motion; as the wheel B revolves, the pin *i* strikes against the slide, and brings the aperture in it under that in the bottom of the hopper; two or more peas fall into the aperture in the slide, thence into the discharge spout *f*.

Claim.—The arrangement of the slide C, hand lever *b*, standard *d*, and the wheel B, provided with the pin *i*, in combination with the cultivator, constructed substantially as and for the purpose set forth.

No. 29,135.—CHARLES A. BOYNTON, of Hyde Park, Vt.—*Improved Butter Worker.*—Patent dated July 17, 1860.—This invention consists in the combination of an adjustable clamp for holding the pails with a horizontal disk spur wheel and a pinion level spur wheel and crank, for giving to the tub or disk wheel a rotary motion, and in arranging over this disk wheel in a suitable manner a conical pressing or packing roller that is made to act upon the top of the butter when put into the tub by a hand lever, so as to forcibly pack the butter down in the tub, and if necessary print or stamp the surface of the butter in the tub at one and the same operation of pressing.

Claim.—Attaching a tub to receive the butter to a rotary disk B, in combination with the conical pressing roller K, arranged and operated substantially as described and to obtain the described results.

No. 29,136.—EPHRAIM BRIGGS, of Medina, Ohio.—*Improvement in Cultivators.*—Patent dated July 17, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the main beam A and the side beams or wings C C, the posts D D D D, the shovels E E E E, bars F F F F, bolts G G G G G G, changeable braces H H, handles I I, and round K, in the manner and for the purpose set forth.

No. 29,137.—WILLIAM A. BROWN, of Philadelphia, Pa.—*Improvement in Couches for Railroad Cars.*—Patent dated July 17, 1860.—In this invention a support G is slid out from the side of the car, at a height sufficient to clear the backs of the seats; the support G is made to turn up or down in the side of the car, between the frame work, one end to work in a groove or rabbet; a post, rod, or brace H, is connected or disconnected with the support G, to turn from the side, bottom, or top of the same to the floor, or to turn up from the floor or side, by supporters from the ceiling.

Claim.—Supporting the couch by supports G drawn from the side of the car, when used in combination with the posts H, substantially as described.

No. 29,138.—GEORGE CHURCHILL, of Hartford, Conn.—*Improvement in Spools for Sewing Machines.*—Patent dated July 17, 1860.—This invention consists in the construction and arrangement of a conical pin, with a thin elongated elastic spring tube surrounding and revolving on the same.

Claim.—The revolving conical spring tube E, in combination with the taper or conical shaped pin A, in the manner and for the purpose substantially as set forth and described.

No. 29,139.—ELIJAH B. CLARK, of Tallahassee, Fla.—*Improvement in Ploughs.*—Patent dated July 17, 1860.—When the bar E is taken up or shortened, the foot G has a greater inclination given it, and made to approach nearer a vertical line as the bar E is let out from the beam A. The landside F always retains its horizontal position, whatever degree of inclination the foot G may have.

Claim.—The arrangement of the adjustable diagonal bar E, swinging foot G, swinging bar D, horizontally and vertically moving sole F, and beam A, as and for the purpose shown and described.

No. 29,140.—DAVIS J. COCHRAN, of Centreville, Ind.—*Improvement in Compounds for Tanning.*—Patent dated July 17, 1860.—By this invention the hair is removed from the hides, by any of the known ways, after which they are handled from two to four days in the following compound or solution: Eight gallons of water, eight pounds of terra japonica, sixteen pounds of common salt, one half pound of extract of elder, two pounds of saltpetre, one pound of alum, one pound of aloes, one ounce of opium.

Claim.—The employment of the within named ingredients, compounded in substantially the proportions specified, for the purpose of making a tanning liquor, as fully set forth.

No. 29,141.—ELEAZER COFFIN, of Indianapolis, Ind.—*Improved Mortising Machine.*—Patent dated July 17, 1860.—The claim and engravings give an idea of the nature of this invention.

Claim.—The cutter and clearer H, cutter holder I, adjustable hinged table O, crank K, and screw U, when connected and operated in connection with the end cutting chisel R, holder A, lever B, pitman C, lever D, and the rests F F and G, or their equivalents, as set forth.

No. 29,142.—GEORGE COLLYER and A. HAMILTON PATTERSON, of Philadelphia, Pa.—*Improvement in Coupling for City Railroad Cars.*—Patent dated July 17, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim*, first, constructing the enlargement *d* of the pole with a bevelled face, in the manner and for the purpose substantially as set forth.

Second. Giving the tumbler B a rounded form at the end, in the manner and for the purpose substantially as set forth.

Third. The extension *a*, having an eye *b*, for joining the box to the car.

No. 29,143.—JAMES CONNELL, of Port Huron, Mich.—*Improvement in the Preparation of Tanning Extracts.*—Patent dated July 17, 1860.—The claim explains the nature of this invention.

Claim.—The process of manufacturing the aqueous extracts of the tanning principles contained in trees and shrubs, by concentrating the extract by evaporation, and then mingling with it a desiccated pulverized vegetable fibre containing the principles of the extract.

No. 29,144.—JOSEPH CORDUAN, of Brooklyn, N. Y.—*Improved Mode of Coating Type Metal with Brass.*—Patent dated July 17, 1860.—This invention consists in the nature of the solution forming part of the electrical circuit, in preparing which the ingredients and the manner of preparing and mixing them together in solution are, to a considerable extent, different from any process heretofore known.

The inventor says: I *claim* the solution composed of the ingredients and prepared and mixed together, as described, for the purpose of plating or coating the faces of printers' type,

made of type metal, with brass, in a manner more hard, smooth, and durable, and with greater economy, than has heretofore been attained.

I also claim, in connection and combination with the above, the using of a brass vat for containing the solution, to be connected with the positive pole of the battery, instead of having a separate plate of brass for that purpose.

No. 29,145.—HAROLD J. COSTER, of Chicago, Ill.—*Improvement in Flower Stands*.—Patent dated July 17, 1860.—This invention consists in adapting to a flower stand a heating apparatus, in connection with a movable frame.

Claim.—The combination of the different parts described, that is to say, the flower stand proper A, the heating apparatus C, in combination with the movable cover B, weight F, cord g, pulleys P, or their equivalents, and outer case or bureau G, all arranged substantially as and for the purpose set forth

No. 29,146.—LUCIUS DIMOCK, of Hebron, Conn.—*Improvement in Machines for Stretching Silk in the Hank*.—Patent dated July 17, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination, with a steaming and stretching box for stretching hanks of silk, of the cylinder and piston, whereby a direct application of power may be obtained in a simple and compact manner, essentially as described.

No. 29,147.—THOMAS H. DODGE, of Washington, D. C.—*Improvement in Cotton Cultivators*.—Patent dated July 17, 1860.—As this machine is drawn forward by the beam A the plough share attached to E turns the earth towards the plants, while the guard or shield F prevents it from falling on and covering up the same. The coulter H, which runs in advance of the shield F and the plough, scrapes the top of the earth away from the plants, thus cutting up the weeds, while the plough which follows turns back the earth towards the plants.

The inventor says: I *claim*, first, in combination with a plough or cultivator, the self-adjusting rotary shield F, arranged to protect the young plants, as described, and as shown in Fig. 1.

Second. I claim, in combination with the plough or cultivator, the self-adjusting guard coulter H and rotary shield F, as and for the purposes set forth.

No. 29,148.—JAMES DOTY, JR., of West Falls, N. Y.—*Improved Mop Head*.—Patent dated July 17, 1860.—This invention consists in the employment of a pivotted lever, and in the combination of the same with other devices.

Claim.—The lever *b* and staff A, in combination with roller *a* and link *d*, substantially as and for the purpose specified.

No. 29,149.—J. W. DURHAM, of Durhamville, Tenn.—*Improved Engine for Employing Steam or any other Aeriform or Gaseous Body under Pressure to obtain Motive Power*.—Patent dated July 17, 1860.—The claim and engravings explain the nature of this invention.

Claim.—An engine, composed of an endless chain of buckets, arranged within a box of water, with suitable pipes or other means of ingress and egress to and from the said box, the whole being constructed, arranged, and combined so as to produce an operation substantially as described.

No. 29,150.—ADAM ERNST and C. SHEPARD, of Milwaukie, Wis.—*Improvement in Hot Air Furnaces*.—Patent dated July 17, 1860.—The whole furnace is surrounded by brick work, and suitable flues lead from its space within the brick work, and around the furnace, to the apartments to be supplied with hot air.

Claim.—Combining the flues of a furnace, surrounded by double walls, with collars S, and covers R U W V, substantially as and for the purposes described

No. 29,151.—CHARLES J. FERGUSON, of New York, N. Y.—*Improved Clothes Frame*.—Patent dated July 17, 1860.—A is a shaft arranged to revolve in and between two upright pillars or posts B, connected at the bottom by a bed piece or tie C, the fixing of which to the ground or otherwise, maintains the entire machine firmly in proper position. Near each end of A, and inside or between the uprights B, are fixed two counterpart metallic hubs D bearing eight equi-distant arms *a*.

Claim.—The combination, with the reel, of the revolving slats, the cog-wheel G, and endless screw or worm H, arranged and operating together in the manner and for the purpose specified

No. 29,152.—AUGUST FRIEDRICH and CONRAD WALTER, of New York, N. Y.—*Improvement in Tobacco Boxes*.—Patent dated July 17, 1860.—This improvement consists in providing the box with a vertical plate secured to a spring, for the purpose of compressing tobacco contained within the box.

Claim.—The combination of the vertical plate *b* and spring *a* with the segment-shaped bow *c e¹ g*, substantially in the manner and for the purpose described.

No. 29,153.—JOHN U. FIESTER, of Winchester, Ohio.—*Improvement in Shovels*.—Patent dated July 17, 1860.—The scoop or shovel bowl *A* has edges or sides *a*. *B* is a hinge at the upper end of the scoop, by which it is hinged to the lower handle *C*. *D* is the upper handle, similar to the handles of other spades or shovels. *E* is a short metallic lever extended to the handle *D*, and fastened therein by a ferule.

Claim.—The lever-hinged shovel, constructed and operating as described and for the purposes set forth

No. 29,154.—C. J. FISHER, of Waukwow, Iowa.—*Improvement in Horse Collars*.—Patent dated July 17, 1860.—*A* represents the two parts of the collar, and the lower ends connected by the strap *B*, or by any suitable snap. In the upper end of each part *A* a slide *C* is fitted; the slides are perforated with holes, and their outer ends may be connected by a strap *D*.

Claim.—The combination of the curved and pivotted hames *E E*, having their ends connected at *F*, and provided with socket joints *G*, with the divided collar *A A*, in the manner and for the purpose substantially as shown and described.

No. 29,155.—JOSEPH H. FISHER, of Placerville, Cal.—*Improvement in Fastening Handles to Picks and Other Tools*.—Patent dated July 17, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination, with a handle which extends partly into the eye of the pick, and has a socket in its rear end, and two shouldered spring straps at its sides, of a portable wedge constructed with a tongue and a gib, and a key seat or slot.

No. 29,156.—HENRY C. FOOTE, of McGaheysville, Va.—*Improved Pocket Calendar*.—Patent dated July 17, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The calendar composed of the three perforated plates *A A¹* and *B*, held in place by a split ring, or its substitute, as and for the purposes set forth.

No. 29,157.—MAHLON J. GALLAGER, of Savannah, Ga.—*Improvement in Breech-Loading Fire Arms*—Patent dated July 17, 1860.—The claim and engravings explain the nature of this invention.

Claim.—In combination with a breech-loading gun, in which the cartridge chamber is divided at or near its middle, and a lever and link connection for sliding and tipping the barrel, the slide piece *h*, and guiding ways *g*, and opening *k*, or their substantial equivalents, for causing the barrel, when opening up the cartridge chamber, to move in a right line before it swings on its pivot, substantially in the manner and for the purpose described.

No. 29,158.—BENJAMIN GARVEY, of New York, N. Y.—*Improvement in the Manufacture of Bread*.—Patent dated July 17, 1860.—This invention consists in removing the atmospheric pressure when the materials have been mixed to such a degree that the air diffused through the mass shall, in virtue of the elastic force inherent in it, expand the requisite raising or lightness.

The inventor says: I *claim*, first, the process described of employing atmospheric air, by exhaustion, to produce lightness in bread, cake, confectionery, &c., without the aid of ferments, chemicals, or drugs of any kind.

Second. I claim the same process to insure the raising of bread, &c., under all circumstances, when ferments or chemicals are employed.

No. 29,159.—JOHN GEHR, of Clear Spring, Md.—*Improvement in Hominy Machines*.—Patent dated July 17, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The wheel *C*, having spikes projecting from its side surfaces, and having its entire surface, spokes and all, serrated or ribbed in the manner set forth, when the same is arranged within a drum *E*, with spikes projecting from its sides inside; the whole being arranged in the manner and for the purposes set forth

No. 29,160.—WILLIAM GOWEN, of Wausau, Wis.—*Improved Washing Machine*.—Patent dated July 17, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement of the corrugated stationary wash board *E*, and the corrugated reciprocating spring rubber *F*, in combination with the double crank

shaft *f*, hooks *h*, and frame A of a table, constructed and operating substantially as and for the purpose specified.

Second. The combination, with the crank shaft *f*, and rubber carrying frame G, of the double rotary hook H, substantially in the manner and for the purpose specified.

No. 29,161.—JOHN C. GREGG, of Hillsboro', Ohio.—*Improvement in Grain Separators*.—Patent dated July 17, 1860.—This invention consists in a peculiar combination of concentric screens and spiral conductors for the separation of different kinds of grain.

Claim.—The combination of screens A B C, spiral conveyors E E¹ E², and apertures d¹ b c c¹, substantially as and for the purposes set forth.

No. 29,162.—LOURE GREEN, of Great Bend, Pa.—*Improvement in Ploughs*.—Patent dated July 17, 1860.—This invention consists in constructing and combining the several parts of the plough.

Claim.—The arrangement and combination of the mould board Z, share Y, landside Q, and standard X; the whole being constructed as and for the purposes described.

No. 29,163.—ASA GREENWOOD, of Toulon, Ill.—*Improved Clothes Frame*.—Patent dated July 17, 1860.—A is a rod or pole, provided with a hub, or cap B, and a slider C. A series of radial arms D is connected to the cap B, each arm being hinged to the cap, so as to be capable of being turned through a quadrant of a circle, and either parallel with, or at a right angle to, the pole A. Another series of arms E is similarly applied to the slider C, which is so adapted to the pole A as to be capable of being moved thereon, both toward and away from the hub B, is stationary on the pole.

Claim.—The combination and arrangement of two sets of radial arms D D D E E E, and one set of parallel bars F F F, together and with the pole A, stationary cap B, and slider C, substantially as specified.

No. 29,164.—WILLIAM D. HALL, of Hamden, Ct.—*Improvement in Fish Oils*.—Patent dated July 17, 1860.—This invention consists in the process of boiling the fish in the water until the sounds, or air bladders, have burst, or have been dissolved, so as to allow the air to escape, when the residuum, or solid portion of the fish, will sink to the bottom, while the oil, in a clarified state, will float upon the top of the water, entirely separated by a stratum of water from all the solid substances, when the oil may be drawn off in any convenient way.

Claim.—As an article of manufacture, an oil extracted from fish in the manner set forth.

No. 29,165.—AMOS B. HARLAN, of Ercildown, Pa.—*Improved Washing Machine*.—Patent dated July 17, 1860.—This invention consists in the arrangement and combination of the different devices.

Claim.—The arrangement of the swinging beater *d*, and pins *i i*, when used in combination with the open revolving wheel provided with bevelled slats, substantially as and for the purpose specified.

No. 29,166.—JACOB A. HARTSFIELD, of Kinston, N. C.—*Improvement in Cotton Cultivators*.—Patent dated July 17, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of A, the main frame; A¹ and A², the cross bars; E and E¹, the scrapers; G, the gear wheels; C, the shaft; D, the chopper; F, the guide pole; H, the handles; B and B¹, the vertical posts; c and c¹, the slots; d¹, the slot in revolving shaft; a¹, the pinion gear wheel; and F¹, the hounds; the whole being constructed and combined as described, for the purposes set forth.

No. 29,167.—FRANCIS P. HELLER and ELIAS YOUNG, of Cincinnati, Ohio.—*Improvement in Warm Air Furnaces*.—Patent dated July 17, 1860.—This invention consists in an arrangement of warm air passages and flues for the more effective, equable, and healthy action of this class of furnaces.

The inventors say: We *claim*, first, the combination of the vertical diaphragms *c*, with the drum C, and tubes G and G¹, operating in the manner and for the purposes set forth.

Second. The arrangement of the air reservoir E, annular air and smoke chambers *a* and *b*, and tubes G G¹ G², operating in the manner and for the purposes explained.

No. 29,168.—DANIEL HEMINGWAY, of Covington, Ky.—*Improved Fire Place and Chimney*.—Patent dated July 17, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the aperture in the back of fire places, to be closed by sliding doors, in combination with a cooking stove or range in the rear, substantially as and for the purposes specified.

Second. I claim the enlarged space on each side and above the mantel, as arranged, the

contracted flue above, the metal plates in front, the partition in the top, and small outlets, all in combination as specified, for the purposes set forth.

No. 29,169.—THOMAS S. HEPTINSTALL, of Mendota, Ill.—*Improvement in Gang Ploughs*. Patent dated July 17, 1860.—This improvement consists in the arrangement of the several parts.

Claim.—The peculiar arrangement of the frame A, plough B, arms F, with wheels attached, lever C, with castor wheel on its lower end, connecting rod H, lever *a*, curved rack *i*, and pinion *x*, operating by means of crank handle *b*, when the several parts are connected substantially as and for the purpose specified.

No. 29,170.—J. S. HICKEY, of Pike, Ill.—*Improvement in Grain Binders*.—Patent dated July 17, 1860.—This invention consists in the arrangement and combination of mechanism to simplify the construction and facilitate the operation of the machine.

The inventor says: I *claim*, in combination, with a binding mechanism arranged on the rear edge of the platform of a harvester, and operated by hand, the vibrating lifter B, and bifurcated foot lever B¹ I, constructed, applied, and operating as specified for the purpose set forth.

I also claim, in combination with the slotted pinion L, and a slotted holder bar *b*, the vibrating shear *d d*², and hook *c*, and actuating cam *m*, and spring *e*, when the whole is arranged to operate substantially as described, for the purpose set forth.

No. 29,171.—JAMES HOTCHKISS, of Yellow Springs, Ohio.—*Improvement in Brick Machines*. Patent dated July 17, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination and arrangement of the single spiral wing H, and the double spiral wings I I, turning in opposite directions and both producing a downward action, substantially in the manner and for the purposes specified.

No. 29,172.—JAMES Y. HUMPHREY, of Philadelphia, Pa.—*Improved Mica Chimney for Lamps*.—Patent dated July 17, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the tapering cap *b*, with the mica tube A *a*, and metal ring or supports *c c*¹ *g g*¹, as and for the purpose described.

No. 29,173.—(Suspended.)

No. 29,174.—LAWSON C. IVES, of Hartford, Ct.—*Improvement in Thread Polishing Machines*.—Patent dated July 17, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, a rotating, polishing surface, composed of alternate brushes and rods, substantially as described; and this I claim also, when an apparatus for heating either the rods or the brushes, or both of them, substantially such as specified, is combined with such a polishing surface.

Second. A rotating polishing brush, in combination with an apparatus substantially such as specified, for drying and heating the brushes, and in combination with a size vat.

No. 29,175.—CHARLES JONES, of Philadelphia, Pa.—*Improvement in Stoves*.—Patent dated July 17, 1860.—The claim and engravings explain the nature of this invention.

Claim.—As a new article of manufacture, a stove provided with a flue from the space below the grate to the space above the fire within the outside case of the stove, for the purpose specified.

No. 29,176.—HERMANN KALLER, of Perry, Ill.—*Improvement in Seeding Machines*.—Patent dated July 17, 1860.—The object of this invention is to facilitate and perfect the seed dropping operation, and also to render the shares capable of being more readily raised by the driver than heretofore.

Claim.—The arrangement of the rods *ff*, bars K, distributing wheels J, spouts E, runners H, levers L M, castor wheel N, and frames A D, as and for the purpose shown and described.

No. 29,177.—HENRY KAY, of Brooklyn, and THOMAS AVERY, JR., of Morrisiana, N. Y.—*Improvement in Planishing Copper Vessels*.—Patent dated July 17, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The application of the screw, nuts, and link, as described, to the head or heads in the interior of the work, for adjusting and controlling the position of the heads from the outside during the operation of planishing, rivetting, &c., as set forth.

No. 29,178.—LORENZO D. LANE, of Freeport, Ill.—*Improved Governor Attachment to Grain Separators*.—Patent dated July 17, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the employment or use of a governor F, connected, substantially as shown, to slides *y y* fitted over the blast induction orifice *x* of the fan of a grain separator, for the purpose set forth.

Second. Connecting, substantially as shown, with the governor F the link slide *h* fitted in the slotted bell crank *d*, and arranged to operate as and for the purpose specified.

Third. Attaching the shaft *l*, of the governor F, to the platform D, which is fitted on an axis and adjusted by screws *k*, or their equivalents, for the purpose set forth.

No. 29,179.—THOMAS LANGDON and CHRISTIAN WEITMAN, of Hazleton, Iowa.—*Improved Broom*.—Patent dated July 17, 1860.—This invention consists in the use of a screw iron of a T-shaped metal cap for the ends of the whisps of broom corn, two clamping plates between which the T-iron is interposed, and a handle that secures the whole together.

Claim.—The combination of the T-piece B, its rod C, clamping plates D D, cap B, nut *a*, with the handle A, all relatively arranged in the manner set forth.

No. 29,180.—JOHN LEMMAN, of Cincinnati, Ohio.—*Improvement in Hoisting Apparatus*.—Patent dated July 17, 1860.—This invention consists in an apparatus designed for the purpose of hoisting and lowering merchandise and heavy bodies; it is adapted to the ordinary hatchways of vessels and warehouses.

The inventor says: I *claim*, first, the pulleys M K U and the tension pulley R carried by the bar S, all arranged and operating substantially as and for the purpose described.

Second. The system of gearing, composed of gear wheels G G H H I I and racks F F, all arranged and operating substantially as and for the purpose described.

No. 29,181.—JOHN H. LYON, of New York, N. Y.—*Improved Seal Lock for Railway Cars*.—Patent dated July 17, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination, with the ends *c c* of shackle A, of the soft metallic rivet B, as and for the purpose shown and described.

Second. Bevelling the ends *c c* of the shackle A, as and for the purpose shown and described.

Third. Making the hole in the shackle which receives the fastening rivet of conical or bevelled form, so that, by the act of opening, the rivet cannot draw through the hole, but will break in or about its middle, as and for the purpose shown and described.

No. 29,182.—GILBERT S. MANNING, of Springfield, Ill.—*Improvement in Excavating Machines*.—Patent dated July 17, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the spring mould board, for the purpose of allowing stones and other substances to pass between the plough and the bucket wheel, thus preventing choking the machine, substantially as set forth.

Second. The spring plate in combination with the wheel A, substantially as set forth.

Third. The use of the wheel B, the same being adjustable both vertically and laterally, the whole being arranged and operated substantially as set forth.

Fourth. The forked guides K and S in combination with the hinged mould board, substantially as set forth.

No. 29,183.—P. T. MAYNE, of Keosauqua, Iowa.—*Improvement in Excavating and Grading Machines*.—Patent dated July 17, 1860.—This invention consists in the combination of hinged spades hung to central disks, with a wheel, the rim of which is provided with stops.

The inventor says: I *claim*, first, the combination of the hinged spade *c* hung to its central disks *e*, with a wheel, the rim *a* of which is provided with stops *b*, substantially as and for the purpose set forth.

Second. An angular frame *n*, pivotted at one end and bearing with the other end upon the tongue *k*, in combination with pulleys *q s t* and rope *p*, substantially as and for the purposes set forth.

No. 29,184.—MATTHEW C. McCULLERS, of Herndon, Ga.—*Improvement in Ploughs*.—Patent dated July 17, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Securing the beam handles and mould board together by means of the braces C D, straps *d*, and pins or bolts 2 3, the whole being constructed, arranged, and united substantially in the manner set forth and explained.

No. 29,185.—THOMAS MCINTIRE, of Franklin Furnace, Ohio.—*Improvement in Cotton Bale Fastenings*.—Patent dated July 17, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The new article of manufacture herein described, to wit: a stiff metal tie plate for cotton bale hoops, made with T-slots in it, a transverse stop bar C between the slots, and two vertical square shoulders *a a* at the termination of the slots and below the under side of the bar C, for use in combination with a cotton bale hoop which has T-shaped ends, in the manner and for the purpose described

No. 29,186.—JOHN E. MCNAIR and JOHN C. ELLIOTT, of Augusta County, Va.—*Improvement in Railroad Gates*.—Patent dated July 17, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the curved levers A A, connecting rods E E, eccentrics B B¹ B², connecting rods L, and levers C C, with the gate, which slides in grooves in the posts, and which is provided with cords and pulleys for elevating it, when the several parts are connected and used substantially as and for the purpose set forth.

No. 29,187.—LEMAN C. MINER, of Hartford, Conn.—*Improvement in Attaching Thills to Vehicles*.—Patent dated July 17, 1860.—This invention consists in the arrangement of the shackle and shaft, connecting with the axles of carriages, to prevent rattling.

Claim.—The projection on the bolt D and the arrangement and insertion of an elastic and compressible substance in the countersink of the jaw or jaws of the clip A, all in combination in the manner substantially, and for the purpose, as set forth and described.

No. 29,188.—T. J. NEWLAND, of Wolcott, Vt.—*Improvement in Corn Shellers*.—Patent dated July 17, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the rigid angular frame with the stationary plate P, movable plate B, adjustable bearing piece D, adjustable guide piece C, adjustable hook *c*, eye *b*, in position described, spring S, roller *r*, when these parts are arranged for joint operation as and for the purpose set forth

No. 29,189.—JOHN PAFF, of Eden, N. Y.—*Improved Churn*.—Patent dated July 17, 1860. This invention principally consists in the construction of the dashers and their arrangement on the dasher rod.

Claim.—The dashers K and L, provided with inclined wings *l l*, as described, secured one above the other loosely on the dasher rod I, the connection with said dasher rod being effected by means of the grooves *m m* and pins *n n*, the whole arranged, combined, and operating substantially in the manner and for the purposes specified

No. 29,190.—LEONARD PARKER, of Winterset, Iowa.—*Improved Rat Trap*.—Patent dated July 17, 1860.—This invention consists in an arrangement of transparent guards, in combination with drop doors, placed on the ordinary rat trap, furnished with a conductor or passage, which is perforated for the purpose of admitting light into it.

Claim.—The combination of the transparent guards, consisting of uprights C, and glass *x*, drop doors *b*, and conducting tube *f*, when used in connection with the ordinary rat trap, the whole being combined, arranged, constructed, and operated in the manner described and for the purpose set forth.

No. 29,191.—WORDEN P. PENN, of Belleville, Ill.—*Improvement in Seeding Machines*.—Patent dated July 17, 1860.—A represents the frame of the machine, and L the axle upon which the wheels are fixed to transport the machine; B is the hopper box for the grain, and C the hopper box for the grass seed.

Claim.—The arrangement of the hook and cam bracket Q on the bar P, and, with the bracket *d* on the bar I, to open and close the valves *b b*, in the manner set forth.

No. 29,192.—ANCEL W. PORTER, of St. Johnsville, N. Y.—*Improved Metal Cap for Axe Helves*.—Patent dated July 17, 1860.—This invention consists in providing an axe head with an adjustable head, and also in providing the helve with a suitable tenon, in order to secure the head of the helve firmly in its position.

Claim.—The head or cap for axe helves manufactured of metal or any suitable material, and constructed as described, so as to be readily attached to the helve, in the manner as set forth and specified.

No. 29,193.—IGNAZ RAMMINGER, of New York, N. Y.—*Improvement in Detachable Whiffletrees for Vehicles*.—Patent dated July 17, 1860.—This invention consists in the construction and operation of an apparatus which is intended to be attached to the axle of a vehicle, and

by the use of which the horses, when running away, may be quickly detached from the vehicle.

Claim.—The use or employment of the rods G G, provided with the right handed (I) and left handed (J) screw threads, in combination with the spring O, strap R, provided with handles S, hub L, and axle B, when the same shall be arranged and operated in the manner described and for the purpose as set forth.

No. 29,194.—SILAS G. RANDALL, of New Britain, Conn.—*Improvement in Hay Presses.*—Patent dated July 17, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the arrangement of the platen O and its double rock bars L L with the sliding frame K K, the actuating detents *e e*, the driving shaft R, the cam *g*, and the retaining detents *e¹ e¹*, substantially in the manner and for the purpose set forth.

I also claim the grooves *j j* in the upper and lower sides of the compressing box, in connection with the grooved angle blocks *i i*, combined with the platen of the press, and the apertures *n* in said platen, all substantially as set forth.

No. 29,195.—CHARLES L. RICE of Milwaukee, Wis.—*Improvement in Pumps for Locomotive Engines.*—Patent dated July 17, 1860.—The cross pieces *x x*, being a part of the caps, are removed with the caps, and, when in place, in connection with the projections *i i*, hold the caps firmly in position.

The inventor says: I *claim*, first, constructing the valve chambers and air chambers of one piece, and arranging them in relation to each other, as set forth.

Second. The cross pieces *x x*, and the cap in connection with the projections *i i¹ i² i³*, constructed and arranged as and for the purposes described.

No. 29,196.—MARK RIGILL and W. D. IVEY, of Dawson, Ga.—*Improvement in Cotton Cultivators.*—Patent dated July 17, 1860.—A guard wheel G is attached to a brace or plate H on a fulcrum *d*, the brace or plate H being pivotted at the end *e*, while its other end is perforated with the holes *f f*, whereby it can be adjusted to set the wheel G up or down, by means of the bolt *g*, which passes through the beam A and one of the holes *f* in the plate H.

Claim.—The arrangement of the guard wheel G, plate H, adjusting rod F, with the beam A and standard E, as and for the purposes set forth.

No. 29,197.—GEORGE A. ROLLINS, of Nashua, N. H.—*Improved Machine for Crushing Stone.*—Patent dated July 17, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination of the crushing chambers E¹ E¹ with a central vibrating crushing block, for the purposes stated.

Second. The combination of the corrugated jaws D¹ D¹ and adjusting screws *f¹ f¹* with the central block D, constructed and operating substantially as set forth.

Third. The combination of the shaft *e*, eccentric *e¹*, and sliding piece *f*, with the crushing block D, substantially as set forth.

No. 29,198.—EDWARD L. SEYMOUR, of New York, N. Y.—*Improvement in Ore Separators.*—Patent dated July 17, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement of a series of horizontal and stationary sieves, each acted upon by an air blast from bellows, when arranged in steps, as explained, and so that the pulverized ore driven from each preceding one by the air blast shall fall upon and supply the next, all in the manner and for the purpose made known.

Second. With sieves so acting and arranged, the combination of the transverse ribs *i i i*, &c., for the purpose set forth.

No. 29,199.—WILLIAM M. SLOANE, of Buffalo, N. Y.—*Improvement in Stave Machines.*—Patent dated July 17, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The application and use of the drums A A, when constructed in the barrel form, in combination with the formers F F F, so that the stave may be chamfered and crozed while it is bent in the exact form, or nearly so, which it will occupy when set up in the barrel, substantially as described.

No. 29,200.—FREDERICK E. SICKELS, of New York, N. Y.—*Improvement in the Mode of Steering Vessels.*—Patent dated July 17, 1860.—The principle of this invention consists in bringing to the aid of the steersman the power of steam, so arranged as to alternately move and hold the rudder of the vessel in any required position, according to the action of the steersman

The inventor says: I *claim* the combination of the rudder of a vessel with machinery to cause the power of steam, in connection with the action of the steersman, to alternately move and hold the rudder.

I also claim the specific arrangement of machinery shown, or any other substantially the same, for the purpose specified.

No. 29,201.—C. W. STAFFORD, of Burlington, Iowa.—*Improvement in Mole Ploughs*.—Patent dated July 17, 1860.—This improvement consists in a novel mode of supporting, bracing, and operating the mole tooth, with its attachments, for the purpose of regulating its depth below the surface of the ground, and to run it into or out of the ground at pleasure.

Claim.—The adjustable saddle N, in combination with the mole tooth and its coulter I, arranged and operating in the manner and for the purpose set forth.

No. 29,202.—WILLIAM A. SUTTON, of New York, N. Y.—*Improvement in Sewing Machines*.—Patent dated July 17, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Combining a rocking lever D, which has a curved slot E F G near its forward end, with the eccentric pin H upon cam shaft P, which latter is arranged near the front end of the machine and near the shuttle and the cloth feeder, with the cams L K N T¹, pin R¹, hinged shuttle driving device Q T, and cloth feeding mechanism E W Z, substantially as and for the purposes set forth.

No. 29,203.—ISAIAH W. TABER, of New Bedford, Mass.—*Improvement in Lamps*.—Patent dated July 17, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Locating the independent air chamber *e* in the space between the flat wicks of said lamp, and then supplying the said chamber with air through the medium of independent induction tubes *g g*, when the united flame produced by both of said wicks is made to pass up through a slit in the deflector *c*, which surmounts the perforated sides *b* of the outer air chamber of said lamps, all substantially as set forth.

No. 29,204.—EPHRAIM U. THOMPSON, of Bristol, Me.—*Improvement in setting up Ships Rigging*.—Patent dated July 17, 1860.—This invention consists of a device for grasping the ends of the shrouds, so that when the shrouds are set up every fibre bears its proportionate share of the strain, at the same time the ends of the shrouds are sheathed and protected from the weather; and also in a peculiar construction and combination of the lanyard and jack.

The inventor says: I *claim*, first, the combination of the fid C and thimble B, constructed, applied, and operating substantially as and for the purposes set forth.

Second. The lanyard E E¹, constructed and operated substantially as described.

Third. The described combination of the jack H I J K, and lanyard E E¹, operating as set forth.

No. 29,205.—L. THORP and WILLIAM D. SHURTLEFF, of Turner, Me.—*Improvement in Railroad Car Couplings*.—Patent dated July 17, 1860.—The inventor says: I have contrived a mechanical hand which supports and guides the link and directs it into the flaring mouth of the buffer whenever the cars are brought in contact with each other, and without requiring the aid of the operative, or rendering it necessary for him to be between the cars as they approach each other.

Claim.—The hand P, operating in connection with the guide bar R, and pin *m*, or their equivalents, for the purpose specified.

No. 29,206.—HENRY D. VANDERCOOK, of Marshall, Mich.—*Improved Clap-boarding Gauge*.—Patent dated July 17, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The mode of holding clapboards in true parallel lines to a building, while they are being scribed, fitted, and nailed, by means of the clamping stock A and attachments, in combination with the adjustable gauge stem G, constructed and used substantially in the manner as described and set forth.

No. 29,207.—JOHNATHAN WARNER and THOMAS C. SILLIMAN, of Chester, Ct.—*Improvement in Fastening Pins in the Bows of Ox Yokes*.—Patent dated July 17, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The method of fastening pins in the bows of ox yokes by means of the upright loop or staple B, and the ring C, or their equivalents, operating substantially as described and for the purpose specified.

No. 29,208.—J. C. WHITSON, of Marion, N. C.—*Improvement in Railroad Switches*.—Patent dated July 17, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination of yielding bars $j\ i$, each provided with two links $m\ p$ and $n\ o$, toothed head block S , arm Z , star wheel $i^1\ j^1$, slotted disk j^2 , and wedge-shaped pawl d^1 , or their equivalents, substantially as and for the purposes set forth.

Second. The combination of the above device A , with two devices $B\ C$, each of the latter consisting of a sliding bar v^1 , and two star wheels $x^1\ y^1$, substantially as and for the purposes set forth.

Third. The combination of a slotted sleeper b , and a wedge-shaped switch bar c , with wedge-shaped and slotted lifters $o^1\ o^1$, substantially as and for the purposes set forth.

Fourth. The combination of the wedge-shaped switch bar c , wedge-shaped slotted lifters $o^1\ o^1$, and vanes p, p^1 , substantially as and for the purposes set forth.

No. 29,209.—TURNER WILLIAMS, of Providence, R. I.—*Improved Window Stop and Fastening*.—Patent dated July 17, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Combining with a roller and an inclined surface, serving as a stop and support by a nipping action, a spring catch having a locking action, by means of a shank or guiding piece and a spring or constant force, whereby both the said roller and the spring catch may be controlled by a lever attached to the said shank, for the purpose substantially as set forth.

No. 29,210.—O. H. WOODWORTH, of Coffeville, Miss.—*Improvement in Watches*.—Patent dated July 17, 1860.—This invention consists in enclosing the movement of a watch or other time keeper within a case which is permanently air tight, not only during the ordinary running of the movement, but while it is being wound up, or regulated, or having its hands set.

The inventor says: I *claim*, first, enclosing the movement of a watch, or other time-keeper, within a case which is permanently air tight, not only during the ordinary running of the movement, but while it is being wound up or regulated, or having its hands set, as described.

Second. I claim the combination of the setting post i , the toothed wheel m , the wheel p , the pawl r , the spring n , and ratchet wheel q , substantially as described and for the purposes specified.

Third. I claim the arbor s , with its crank t , in connection with the forked regulating lever u , substantially as described and for the purpose specified.

No. 29,211.—G. W. N. YOST, of Yellow Springs, Ohio.—*Improvement in Cotton Cultivators*.—Patent dated July 17, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination and arrangement of the body of the implement and its movable ploughs B , scraper E , and standards G , constructed as described, whereby it is readily adapted to receive, in turn, the several ploughs and scraper, in order to perform the various modes of cultivation specified

No. 29,212.—ABRAM ACKER, of Ramapo, N. Y., assignor to J. S. WANMAKER & Co., of the same place.—*Improvement in Spring Hinges*.—Patent dated July 17, 1860.—This invention consists in constructing the eyes of a butt hinge somewhat larger than they are at present made for ordinary hinges, and with a sleeve joint to keep them in their proper places; and also in introducing within the tubular eyes, when the two leaves forming the hinge are brought together, a helical spring, which is connected at the bottom, and a cap that interlocks with the eye of one leaf and at the top, and to a hexagonal or octagonal nut.

The inventor says: I *claim*, first, the combination of fixed cap D , spring C , and the cylindrical cap E , with the tubular eyes $B\ B^1$, arranged and operating as set forth, in combination with a locking ring G , or any such equivalent device possessing the advantages set forth.

Second. I claim the projecting lugs on the caps $D\ E$, as and for the purposes set forth.

No. 29,213.—CHARLES R. ALSOP, of Middletown, Ct., assignor to JOSEPH W. ALSOP, of New York, N. Y.—*Improvement in Revolving Fire Arms*.—Patent dated July 17, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the employment, for the purpose of forcing forward the cylinder longitudinally towards the barrel before firing, and of permitting the movements longitudinally away from the barrel, of a cam formed with a regular series of projections and recesses on its periphery, applied substantially as described, and rotating in one direction only.

And I also claim combining such cam with the hammer, either directly or indirectly, by a ratchet and pawl, or their equivalent, in such manner as to be operated by the cocking of the hammer, substantially as described, but to remain stationary during the fall of the hammer

No. 29,214.—LESTER BUTLER, of Kenosha, Wis., assignor to himself and C. B. FORD, of the same place.—*Improvement in Railroad Gates*.—Patent dated July 17, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The application of the spiral groove attached to either the posts of the gate or to the cross piece G, in combination with the construction of the rails, as set forth, as and for the purpose described.

No. 29,215.—SAMUEL FAVINGER, of Philadelphia, Pa., assignor to himself and ABSALOM BARNED, of the same place.—*Improvement in Smut Machines*.—Patent dated July 17, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the fan chamber G, with its vanes H, when arranged in respect to the hopper *p*, the passage *m* and *q*, and the casing L containing the burr K, substantially as and for the purpose set forth.

Second. I claim the peculiar construction of the tapering block or burr K, with its V-shaped projections, having V-shaped ribs, as and for the purpose specified.

Third. The arrangement of the plate D, with its ribbed surface, the bar *d*, with its ribbed branches and tapering burr and casing L, for the purpose set forth.

No. 29,216.—BENJAMIN GARVEY, of New York, N. Y., assignor to himself and JOSEPH B. DAVOL, of Brooklyn, N. Y.—*Improved Arrangement for Lubricating Pistons*.—Patent dated July 17, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination and arrangement of a lubricator with a piston and cylinder, a valve, or other bearing, for forcing water between rubbing surfaces, substantially as described.

No. 29,217.—BENJAMIN GARVEY, of New York, N. Y., assignor to himself and JOSEPH B. DAVOL, of Brooklyn, N. Y.—*Improved Steam Generator*.—Patent dated July 17, 1860.—A is a "couple" or cell, formed of two thin sheets of metal rivetted together with rivets so close, one to another, that they are held together with a greater force than the steam to be generated between them is calculated to exert.

Claim.—The form of steam generator, substantially described, when employed as specified.

No. 29,218.—BENJAMIN GARVEY, of New York, N. Y., assignor to himself and JOSEPH B. DAVOL, of Brooklyn, N. Y.—*Improvement in the Distillation of Coal Oil*.—Patent dated July 17, 1860.—This invention consists in using compressed air to support combustion, so that the gaseous products may be held under compression until so much of their heat has been utilized, the amount of such utilization depending upon the pressure under which they are generated, that, on being allowed to expand, they will be of about the same temperature and in the same state of elasticity as the surrounding atmosphere.

Claim.—The economizing of caloric, in the manner substantially as described, whatever form of apparatus may be employed for carrying out said invention, and to whatever purpose the same may be applied.

No. 29,219.—OTIS HOOD, JR., of Turner, Me., assignor to himself and H. G. LE BARON, of Portland, Me.—*Improved Coupling for Railway Cars*.—Patent dated July 17, 1860.—A and B show the two bunters, each being furnished with a link socket *a*; from one of them a connection link D extends, it being held therein by a pin *b* extending downward through the bunter; there is hinged to the said bunter a shackle pin supporter or frame E, and in such manner as to be capable of being moved up and down in a vertical plane.

Claim.—My improved railroad carriage coupling, having its separate parts constructed and arranged in relation to each other, and so as to operate together, substantially as shown and described.

No. 29,220.—J. T. VAN KIRK, of Philadelphia, Pa., assignor to A. VAN KIRK & Co., of the same place.—*Improved Ice Pick*.—Patent dated July 17, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The pointed stem A, with its weighted handle B, in combination with the tube D, or other equivalent guide, serrated or otherwise so constructed at its lower end as to retain a hold on the ice during the descent of the said weighted stem, as set forth, for the purpose specified.

No. 29,221.—J. T. VAN KIRK, of Philadelphia, Pa., assignor to J. T. VAN KIRK & Co., of the same place.—*Improvement in Lamps*.—Patent dated July 17, 1860.—This invention consists of a tube containing a rod surrounded by a coiled spring and having a collar near one end and a disk or other suitable handle at the opposite end, the whole being constructed applied to, and combined with the flange or projections which enclose the lower end of the glass chimneys or shades of lamps, &c.

Claim.—Combining the tube G, its rods H, and coiled spring *e*, with the flange or projection which encloses the lower end of the chimney or shade of a lamp, in the manner and for the purpose set forth.

No. 29,222.—J. J. McCORMICK and J. E. JERROLD, of Paterson, N. J., assignors to J. E. JERROLD and EUGENE BEGGS, of the same place.—*Improvement in Car Springs.*—Patent dated July 17, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: I *claim*, first, the employment, for the purpose of producing a car spring, of a long thin strip of sheet steel, wound up so as to form a close coil A, and fastened in this position by clamps B, or their equivalents, substantially in the manner set forth.

Second. The arrangement, in combination with the coil A, of a case C, constructed and operating substantially as and for the purposes specified.

No. 29,223.—F. W. MALLETT, of New Haven, Conn., assignor to G. F. KIMBALL, of the same place.—*Improved Felloe Machine.*—Patent dated July 17, 1860.—This improvement consists in constructing the machine with one or more pairs of cutters, fitted into proper holders or stocks so as to be adjustable, and having between the inner parts of the cutters a circular rest or guide for the felloe while being operated upon, and an adjustable and movable hook to enter into the spoke hole, to hold the felloe steady during the operation of rounding it.

The inventor says: I *claim*, first, the combination of the hook *e*, with the cutters *n n*, &c., with the guide or rest F, when constructed, arranged, and made to produce the result substantially as described.

Second. I claim the combination of the cutters *n n*, &c., with the guide or rest F, when the whole is constructed, arranged, and made to produce the result substantially as described.

No. 29,224.—LOUIS PLANER and JOHN N. SIEGL, of New York, N. Y., assignors to LOUIS PLANER, of said New York.—*Improvement in Shuttles for Sewing Machines.*—Patent dated July 17, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination, with the shuttle A, bobbin D, movable centre B, and spiral spring *b*, or its equivalent, of a transversely arranged adjusting screw *c*, formed or provided with an eccentric *e*, for operating within a recess made in the movable centre, or for action against the latter in a direction contrary to that of the spring and away therefrom, the same forming an adjustable stop or locking pin to the movable centre, substantially as and for the purposes set forth.

No. 29,225.—JOHN C. PLUMER, of Portland, Me., assignor to himself and DAVID ROBINSON, of the same place.—*Improved Shoemakers' Last.*—Patent dated July 17, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the longitudinal hollow or depression on the bottom of the last.

Second. The combination of the longitudinal hollow with the advanced position of the heel seat.

Third. The constricted portion of the last *c e* in combination with the longitudinal hollow

No. 29,226.—ROBERT WILLIAM SIEVIER, of Upper Holloway, England, assignor to WILLIAM LILLEY, of the State of Ohio, U. S.—*Improved Apparatus for Exhausting Atmospheric Air or Gases.*—Patent dated July 17, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The application to ships, mines, buildings, &c., of a jet of steam or air in a shaft or flue, in connection with the fan and director, when the said devices are constructed and arranged as specified, in the manner and for the purpose set forth.

No. 29,227.—ALBERT WILD, of New York, N. Y., assignor to DINKERSPIEL & OPPENHEIMER, of the same place.—*Improvement in Watchmakers' Lathes.*—Patent dated July 17, 1860.—This invention consists, first, in arranging on the shear of a watchmaker's lathe a sliding head, with a swinging frame, which receives the rotary cutters in such a manner that by swinging said frame backward and forward the cutter is forced towards and from the centre of the lathe spindle or of the wheel; second, in the arrangement of a pivotted two-armed lever, provided with adjustable centres to receive and hold the wheels after the same have undergone the first operation of cutting.

The inventor says: I *claim*, first, the arrangement, in combination with the shear B of a watchmaker's lathe, of the sliding head G, with the vertically adjustable part *d* and with the swinging frame H, constructed and operating in the manner and for the purpose set forth.

Second. The combination, with the spiral toothed adjustable cutter K, of the pivotted two-armed lever M, with the set screw *o*, constructed and operating substantially as and for the purpose described.

No. 29,228.—ANTHONY B. ALLEN, of New York, N. Y.—*Improvement in Mowing Machines* Patent dated July 24, 1860.—This invention relates to the means for causing the inner shoe to turn on its hinges, together with the finger bar attached thereto; also to a new and improved combination and arrangement, upon the main frame, of certain means or devices for actuating the lever which moves the finger bar.

The inventor says: I *claim*, first, in combination with the pivotted shoe supporting the inner end of the finger bar, the arrangement of the lever F and projection c, in the manner substantially as and for the purpose set forth.

Second. In combination with the lever F, operating as set forth, I claim the hand lever I, the segments H and H¹, and chain G, or its equivalents, the whole being arranged and operated in the manner substantially as and for the purposes set forth.

No. 29,229.—JOHN R. AGNEW, of Philadelphia, Pa.—*Improvement in School Globes*.—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination of the calipers C C¹, with a horizon F, and hemispheres H H¹, as set forth.

Second. In combination with a concave hemisphere the movable horizon G, turning upon a universal joint at its centre, said joint being supported upon the inner end of the semi-axial rod L, passing through the cylindrical screw Q, as and for the purpose described.

Third. The double pointed zodiacal index M, constructed and operating as described.

Fourth. I claim placing and operating an orrery, more or less complete, within a concave hemisphere or globe representing the celestial universe, substantially in the manner set forth.

No. 29,230.—S. S. BURLINGAME, of Warwick, R. I.—*Improvement in Moulds for Casting Needle Threaders*.—Patent dated July 24, 1860.—This mould consists of two jaws A B, hinged together by means of pivots a, and operated by the handles C. Each of the jaws contains one half the mould, and the jaw A is furnished with two sliding pistons or cone pieces b, which may be operated by the hand levers D, or in any other convenient manner.

Claim.—As an improved article of manufacture, a mould for casting needle threaders, made and constructed as shown and described.

No. 29,231.—JOHN A. BRADSHAW and A. FRANK COLBY, of Lowell, Mass.—*Improved Punching Machine*.—Patent dated June 24, 1860.—A is the bed piece or frame to which the working parts are attached; B is the main shaft. The cam C, on the main shaft, operates the lever D, which lever moves the sliding plate E, carrying the concentric punches F and G up and down. The cam C is a double cam, having one of its throws greater than the other, and as it revolves the lesser throw operates the small punch F, which punches the hole in the nut or washer.

The inventors say: We *claim*, first, the shifting die, in combination with the concentric punches, operated in the manner substantially as and for the purpose described.

Second. The combination of the wedge L, and punch F, in the manner substantially as and for the purpose set forth.

Third. We claim the double inclined plane d, or equivalent, for the purpose and substantially as described.

Fourth. We claim the feed rolls T T¹, operated in the manner and substantially as described.

No. 29,232.—J. H. H. BENNETT, of Hunt's Hollow, N. Y.—*Improved Wagon Brake*.—Patent dated July 24, 1860.—This invention consists in uniting the brake head and the reach by means of a hinge, so that, in backing, the brakes are turned up and the motion of the hind wheels is not interfered with.

Claim.—The arrangement of the hinge e, in combination with the reach E, and brake head G, constructed and operating substantially as and for the purpose set forth.

No. 29,233.—JOHN BEAN and BENJAMIN WRIGHT, of Hudson, Mich.—*Improvement in Grain Winnowing Machines*.—Patent dated July 24, 1860.—This invention consists in combining, with a distributing sieve, a series of sieves peculiarly formed and arranged, by means of which the grain, as it passes from the hopper, becomes equally distributed on the various sieves.

Claim.—The combination of a distributor I, with the sieves K K K, when said sieves are arranged in relation to said distributor, as set forth, for the purpose of equally distributing the grain as it is supplied from the hopper.

No. 29,234.—GEORGE E. BAKER, of Waukegan, Ill.—*Improvement in Gates*.—Patent dated July 24, 1860.—A A represents two parallel sill pieces which are secured at a proper distance

apart by end cross ties *a a* and a central cross piece *B*, the ends of which project beyond the sides of the sill pieces. This central cross piece *B* has a way or guide *b* secured to its upper surface, and the gates *C C*, which are provided with rollers, are fitted in this way, the gates being retained in a proper vertical position by posts *D D*, which are attached to the cross piece *B*, at points in line with the sill pieces *A*, and slotted vertically to allow the gates to work them through.

The inventor says: I *claim* the combination of the pivotted weighted frame *I*, with the platforms *F*, and laterally moving gates *C*, as and for the purpose shown and described.

I also claim, in combination with the pivotted locking lever *K*, bars *L*, rods *M*, and levers *N*, with the platforms *F*, and gates *C*, as and for the purpose shown and described.

No. 29,235.—G. W. R. BAYLEY, of Brashear, La.—*Improved Fastening for Nuts on Railroad Bolts*.—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Locking the nuts of railroad bolts by means of a nut guard *G*, inserted under them, when the same is held in place under the nuts by one or more hold down spikes countersunk into notches or recesses therein, said spike or spikes serving, at the same time, to secure the bracket and rail down to the cross tie, essentially in the manner described.

No. 29,236.—ETIENNE BERNOT, of Paris, France.—*Improved Machine for Cutting Files*.—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the peculiar arrangement of the buffer carrier for the manufacture of files, as described and referred to in Figs 1 and 2, drawing I, and Figs. 4 and 5 and 6, drawing II

Second. The combination of a chain composed of levers and connecting rods, with ordinary or universal joints, capable of working in all directions, as described and referred to in Figs. 1 and 2, drawing I.

Third. In the arrangement of a guide set parallel to the graver, as described and referred to in Figs. 1 and 2, drawing I, and Fig. 2, drawing II.

Fourth. In the arrangement of an eccentric, the pressure of which is proportionally exerted upon the spring as before described and referred to in the Figs. 1 and 2, drawing I, and Figs. 1 and 2, drawing II.

No. 29,237.—MATTHEW BARTHOLOMEW, of Enterprize, Pa.—*Improvement in Machines for Scouring and Separating Grain*.—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the employment or use of the rotating beaters *H I J*, placed within the case *G*, formed of perforated segments *i k m*, provided with vertical convex ribs *o¹*, at their inner sides, in connection with the central openings *g p p¹*, in plates *F K L*, to permit of a blast or draught passage at the centre of case *G*, or around the shaft *E*, as and for the purpose set forth.

Second. The combination of the spouts *B¹ C*, fan *N*, beaters *H I J*, and case *G*, when arranged for joint operation, as described.

No. 29,238.—JOHN S. BROOKS and LEAVITT S. GROVER, of Rochester, N. Y.—*Improved Gridiron*.—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—An improved cooking utensil, consisting of the sunken grate *c*, with the air and flame passages *e e*, at the sides thereof, frying surface *G*, and reservoir *H*, arranged and combined substantially in the manner and for the purposes shown and described.

No. 29,239.—LOUIS BONNET, of New York, N. Y.—*Improved Meat Cutter*.—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the shanks of the stationary knives *D*, between the flanges of the concaves, so that the inner surfaces of the open part of said shanks shall constitute a part of the hollow cylinder, all as shown and described.

No. 29,240.—THOMAS L. BRAYNARD, of New York, N. Y.—*Improved Sash Fastener*.—Patent dated July 24, 1860.—This invention consists of a hinged, or pivotted bar, or latch *a*, which, by its frame *b*, is secured to the bottom bar *c* of the upper sash, and of catch *d*, which by its frame *e* is secured to the top bar of the lower sash *j*; a spring *f* bears against the rear part of the latch, and its end rests against a projection *g*, and its flat surface against a broad base *h* of the latch.

Claim.—The spring catch *d*, and latch *a*, constructed and arranged as set forth.

No. 29,241.—JOHN BROWN, of New York, N. Y.—*Improvement in Steam Boilers*.—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the circulating pipes g^1 and h , formed with the casing f of the flue A, and connected to the casing d , the said flue and casings being constructed and arranged in the manner specified, to afford access for packing the joints, as set forth.

I also claim arranging the water flue guard B within the furnace, in the manner specified, when fitted with the circulating pipes i and k , connecting the same to the respective parts of the boiler, for the purposes and as specified.

No. 29,242.—WILLIAM CLEVELAND, of New York, N. Y.—*Improved Curtain Fixture*.—Patent dated July 24, 1860.—This invention consists in a spring barrel sufficient to roll up the spring and draw down the curtain when the weight of the slat is removed, combined with a weighted slat that is sufficient to overcome the spring and draw down the curtain, and with double cords arranged over pulleys or sheaves in such a manner that the weighted slat can be lifted at both ends, while the spring keeps the curtain rolled up, allowing the weighted slat to descend.

Claim.—The brackets and sheaves ff^1 , and cords $d e$, in combination with the spring roller b and weighted slat c , in the manner and for the purposes specified.

No. 29,243.—CHARLES CHITTERLING, of Dunkirk, N. Y.—*Improved Composition for Lubricating Purposes*.—Patent dated July 24, 1860.—This invention consists in a composition of oxalic acid, epsom salts, lampblack, sulphur, and black lead, which, when it is to be used, is diluted with oil and applied to the axles, or to the journals of the shafts, in the usual manner.

Claim.—The composition of the within-named ingredients mixed together in about the proportion specified, for the purposes set forth.

No. 29,244.—R. K. CAVANAUGH and H. Y. LAZEAR, of Jersey City, N. J.—*Improvement in Cooking Stoves*.—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim*, first, the combination and arrangement, with a stove constructed as described, of the fire box B, perforated flue box H $b b$, and vertical cold air pipe G, in the manner and for the purpose set forth.

Second. We claim the smoke flue K, descending flues $c c$, flue L, and ascending flue M, combined and arranged with relation to the several parts of the stove, all as and for the purpose set forth.

No. 29,245.—JOHN V. B. CARTER, of Albany, N. Y.—*Improvement in Stove and Furnace Grates*.—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the arrangement of grate bars, substantially as described, in order to their being moved past each other with a reciprocating movement, for the purpose of agitating the coal.

Second. The employment of a tridental bar or bars shaped as described, in combination with the fulcrum sockets g or n , the grate bars, and the liberating bar G.

Third. The construction and arrangement of the door T, with its opening $k k$, to pass the ends of the grates, sliding door S, to keep grates in place, and niche L, with its fulcrum socket n .

No. 29,246.—THOMAS CHAMPION, of Washington, D. C., and CHARLES CHAMPION, of Eldorado County, California.—*Improvement in Gas Regulators*.—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim*, in combination with a valve and valve stem and an elastic diaphragm, a flanged nut d for connecting said stem and diaphragm, the whole being encased within an outer shell, substantially in the manner and for the purpose described.

We also claim, in combination with an enclosed diaphragm and an enclosed chamber, the air opening in the cap I and the valve J, for the double purpose of furnishing atmospheric air to the enclosed chamber when the regulator is working, and for closing said air opening should the diaphragm rupture, substantially as described.

No. 29,247.—JAMES J. CLARK, of Philadelphia, Pa.—*Improvement in Telegraphic Repeaters*.—Patent dated July 24, 1860.—This improvement consists in what is called "a repeater," or an arrangement by which telegraph lines divided into more than one circuit, shall operate with the same advantage as though the whole line were constructed in one long circuit.

Claim.—The application of springs or mercury cups, or their equivalents, in conjunction with extra local circuit or circuits, applied in the manner and for the purpose specified.

No. 29,248.—CHARLES F. CORY, of Lebanon, Ill.—*Improved Furnace Grate*.—Patent dated July 24, 1860.—This invention consists in constructing the grates or furnaces of swinging, pendant, movable, and detachable grate bars, as shown at A, and by the use of such a construction of grate bars, and the peculiar arrangement thereof in a furnace, to bring about several important results.

Claim.—The construction and arrangement of pendant, swinging, movable and detachable grate bars and grates for furnaces, substantially as set forth, shown, and described.

No. 29,249.—LUCIUS CRANDALL, of Plainfield, N. J.—*Improvement in Coal Stoves*.—Patent dated July 24, 1860.—This invention consists in the combination of a peculiarly constructed fire box capable of revolving on its axis, with a peculiar means of connecting the same with the flues, and also in connection therewith in certain specific arrangement of parts.

The inventor says: I *claim*, first, the combination and arrangement of the spherical fire chamber M, grated at the side N, and capable of revolving on the trunnions *m*, with the sliding tube R, substantially as set forth.

Second. The arrangement of the revolving vessel M, sliding tube R, case A, and dust damper *h*, substantially in the manner and for the purpose set forth.

Third. In combination with the above, the arrangement of the flues F E G, and dampers I and *e*, substantially as shown.

No. 29,250.—JOHN G. DECOURSEY, of Philadelphia, Pa.—*Improvement in Scissors*.—Patent dated July 24, 1860.—This invention consists of two blades similar to those of ordinary scissors, two springs, a knife blade, and a spring catch.

Claim.—As a new article of manufacture, the blades A and A¹, B and B¹, knife blade E, and spring catch G, or its equivalent, the whole being constructed, combined, and operating substantially as and for the purpose set forth.

No. 29,251.—JACOB DUTCHER, of Gibson, Pa.—*Improved Self-Acting Sleigh Brake*.—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Constructing the roller to which the draught pole is attached so as to act like a crank, as set forth, in combination with the longitudinal rods *m m*, cross rod R, lifting rods *h h*, bars B B, and knives or shoes *k k*—the whole arranged and operating substantially as set forth.

No. 29,252.—DANIEL DE GARMO, of Rochester, N. Y.—*Improvement in Potato Diggers*.—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, corrugating the shovel D of potato diggers, as and for the purpose specified, and giving a corresponding arched shape to the separator M.

Second. The manner of suspending the shovel D and separator M, by means of the adjustable arms *d* and the draft straps *b*, in combination with the cross rod *m* and lever K, as and for the purposes specified.

Third. Constructing the separator M of potato diggers with the fingers suspended from a single rib or stock *q*, at the front end, which leaves the interstices entirely open, thereby providing a free and unobstructed passage for the earth, vines, &c., longitudinally.

Fourth. Giving a side shake or vibration to the rear end of the separator M, as described, the front end being hung to the shovel D by the pivot *p*, thus providing a centrifugal force, which greatly facilitates the clearing of the shovel D and separator M.

Fifth. The revolving wings P, in combination with the shovel D and separator M, for the purpose specified.

No. 29,253.—JOHN DENLEY, of Warsaw, Ill.—*Improvement in Coffee Pots*.—Patent dated July 24, 1860.—A is the outer case of the pot, which is made of the ordinary size and form, and has the usual spout D attached. Arranged in the lower part of the spout is a cup C of smaller diameter than the pot, and having a circular flange B at its upper edge, which flange is soldered tightly to the inner wall of the pot A, so as to sustain the cup C. The bottom of the cup C is intended to be raised above the bottom of the pot. The cup C and flange B constitute a partition, which divides the interior of the pot into an upper and lower chamber.

Claim.—The combination of the cup C, syphon F, and tube E with the pot A and spout D, as and for the purpose shown and described.

No. 29,254.—WILLIAM W. DINGEE, of York, Pa.—*Improvement in Threshing Machines*.—Patent dated July 24, 1860.—A is the shaft on which the cylinder revolves. B B are the bars into which the teeth are inserted. C is a cast iron cover. D is the concave, having teeth similar to those in the bars. E is the feed table, from which the sheaves of grain are fed.

The inventor says: I *claim* forming the cast iron cover with the double concave, as shown, and the peculiarly formed flange F at the feed opening, constructed and arranged as and for the purpose specified.

I also claim the combination of the double boxes N, cast with the hollow support O, and filled with the wood P, arranged substantially and for the purposes set forth.

I also claim, in connection with the above, securing the bevel pinion I to the cylinder head Q, as and for the purpose above described.

No. 29,255.—WILLIAM EBBITT, of New York, N. Y.—*Improvement in Switch Plates for City Railroads*.—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the tongue *d*, having bevelled sides at and near the ends thereof, in combination with the switch plate, containing a bevelled or undercut groove, as and for the purposes specified.

Second. The steadying portion 8 8 on the switch plate at the ends of the grooves, to take the flanges of the wheels, for the purposes specified; but this I only claim when combined with the bevelled tongue *d*, as set forth.

Third. Forming the tongue *d*, with an inclined or bevelled end taking beneath the part 2 of the switch, to prevent the same rising, as set forth.

No. 29,256.—THOMAS EARHEART, of Donelson, Tenn.—*Improvement in Grain Separators*. Patent dated July 24, 1860.—This invention consists in the use of a feed roller, placed at the discharge orifice of the hopper, and using in connection therewith a slide, adjusted in a novel way, to vary the capacity of the discharge orifice.

Claim.—In combination with the roller I, the slide G, when arranged with the rod H and rotating screw *k*, for the purpose specified.

No. 29,257.—EPHRAIM EVERSON, of Haverhill, Mass.—*Improvement in Pegging Jacks*.—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the arrangement of the two curved slots *d e* of the plate D, with the clamp screw and its plates, the same being for the purpose specified.

I also claim the arrangement of the slipping and holding teeth of the cammed and heel stud levers, in connection with the toe rest, so applied to the base plate as to be adjustable with reference to the heel rest, as specified.

I also claim the arrangement of the two studs *g h*, with the two reversed quadrantal slots, the clamp screw, and its plates.

No. 29,258.—ELIAS FORBIS, of London, Ohio.—*Improvement in Capstans for Ditching Ploughs*.—Patent dated July 24, 1860.—This invention consists in the employment and arrangement of the different devices.

The inventor says: I *claim*, first, the levers C C and cord *a*, or their equivalents, when both shall be operated in the manner and for the purpose substantially set forth and described.

Second. The capstan B, hinges *a a*, tongue G, slide *e*, brace or lever *x*, in combination with levers C C, cord *d*; the whole being arranged in the manner and for the purpose substantially set forth and described.

No. 29,259.—DANIEL J. FERRY, of Philadelphia, Pa.—*Improved Machine for Making Friction Wires*.—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the tools D and E, when arranged in respect to each other and the die F, substantially as described, and for the purpose of pressing out, punching, and cutting off in proper lengths, at one operation, the friction wires, for frictional priming.

Second. The projection *r*, with its angular opening, when arranged in respect to the tool D, substantially as described, and for the purpose specified.

Third. The guide H, with its opening C, when arranged in respect to the tools D and E, substantially as described, and for the purpose specified.

Fourth. The stop I and its recess *t*, when arranged in respect to the tool E, substantially as described, and for the purpose specified.

Fifth. The projection *y*, with its angular opening, when arranged in respect to the tool E, substantially as described, and for the purpose specified.

No. 29,260.—WILLIAM FULTON, of Cranberry, N. J.—*Improvement in Lamps*.—Patent dated July 24, 1860.—This invention relates to an improvement in round wick lamps burning coal oils and other substances that are rich in carbon, and which require a considerable amount of heated oxygen to support a proper combustion for illuminating purposes; as one

gallon of oil contains more than double the amount of carbon that the same quantity of whale oil possesses, thereby requiring a greater intensity of heat to consume the carbon of the oil.

Claim.—The peculiar construction of button G, as shown in Fig. 5 and Fig. 6, or its equivalent, in combination with the gauze wire plates C and D, as shown in Fig. 2, or the perforated plates C and D, as shown in Fig. 3, the whole being arranged substantially as and for the purpose set forth.

No. 29,261.—HENRY FELLOWS, of Bloomfield, Ind.—*Improvement in Water Wheels.*—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The attaching of the curved flanches D to the bottom of the penstock A, so as to project within the wheel and form scrolls and water passages *ee* at the inner sides of the buckets, or between the same and the shaft C and chutes E, all being constructed, arranged, and operated in the manner and for the purpose set forth.

No. 29,262.—THOMAS J. FITZPATRICK, of New Orleans, La.—*Improved Chimney Cap.*—Patent dated July 24, 1860.—The part *b* is circular, and mounted on the chimney. In this part is placed the bar *c*, held in position by the cross bars *d*; this bar *c* passing through the guide *f*, which is joined to the upper plate, that has also the step *e* attached, to take the end of bar *c*, on which the cap is suspended, and revolves a pin passing through the bar at *o*, above *f*, to secure a permanent position.

Claim.—The combination of cap *a*, pipe *b*, and bar *c*, made and operated as and for the purpose set forth.

No. 29,263.—JAMES FLATTERY, of Brooklyn, N. Y.—*Improvement in Faucets.*—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Suspending the valve vertically beneath the valve seat solely by the flexible disk or diaphragm D, substantially as described, when said valve is completely detached from and acting independently of the spigot handle G, in the manner and for the purposes specified.

No. 29,264.—WILLIAM FLOWERS and Z. S. PATTON, of Bangor, Me.—*Improved Boat Lowering Apparatus.*—Patent dated July 24, 1860.—This invention consists in certain devices for the purpose of expeditiously raising and lowering a boat.

The inventors say: We *claim*, first, the disks *l*, and pawls *p*, for locking the davits E E¹, operating substantially in the manner described.

Second. Lifting the pawls by the movement of the cradle H, substantially as set forth.

Third. The above described boat-lowering apparatus, consisting of the davits E E¹, with their locking apparatus, the winch D, with its pawl *v*¹, and brake lever *v*, and the pawls *f*, arranged and operating in the manner substantially as specified.

Fourth. The blocks F, with their hooks *m*, substantially as described.

No. 29,265.—GEORGE GAGE, of Kendalls Mills, Me.—*Improved Secretary Bedstead.*—Patent dated July 24, 1860.—The secretary case A is constructed with apartments, or chambers, C D E, disposed on opposite sides of a partition *f*.

Claim.—The arrangement of the chambers D E with the case A, the bed frame and the stationary part B, arranged and operating as described.

No. 29,266.—BIRDSILL HOLLY, of Lockport, N. Y.—*Improvement in Pumps.*—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the combination of the curve-flanged spout section B, with the side plates A A, and cross bolts *b b*, so as to furnish a suitable and convenient support for the pump cylinder and its dependent parts, and a ready means of reversing the position of the spout; the whole constructed, arranged, and operating substantially as specified.

I also claim the arrangement and combination of the adjustable fulcrum yoke G, and arcs L L, having adjusting holes therein with the lever H, having a curved short arm with adjusting holes *cc* therein; all substantially as and for the purpose specified.

I also claim the connecting link *m*, between the piston and valve *k*, in combination with the notch *o*, and the stop *w*, operating substantially as and for the purposes set forth.

No. 29,267.—HENRY HUMPHREYVILLE, JR., of Strasburg, Pa.—*Improvement in Hot Water Apparatus.*—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The vessel L, provided with a removable perforated partition M, and valve V, combined with and secured to the furnace by means of the tubular screw K, and adjustable burrs B B¹, on said furnace, substantially as and for the purposes specified.

No. 29,268.—WILLIAM CLEVELAND HICKS, of Boston, Mass.—*Improvement in Sewing Machines*.—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The application to a single-thread sewing machine of an automatic feeding apparatus or device, operating in concert with an eye-pointed needle and looper, or their equivalents, so as to make a succession of chain stitches of different lengths, so that the long stitches in a seam are connected by one or more short stitches alternately, substantially as and for the purpose or purposes set forth.

No. 29,269.—ISAIAH HODGSON, of New Michigan, Ill.—*Improved Mole Ditching Machine*. Patent dated July 24, 1860.—A represents a beam made of any suitable length and strength, having two stay plates B B secured near its rear end to both the top and the bottom surface, and recessed into the beam. Through this beam, and through the stay plates, passes a standard C, the front edge of which is a knife edge, thus making it serve as a coulter. This coulter passes perpendicularly through the beam, and is fixed in any desirable position by a key *a*.

Claim.—The combination of the scraper J and shaft *e*, with the revolving mole G and coulter C, as and for the purpose shown and described.

No. 29,270.—SHELDON S. HARTSHORN, of New Haven, Ct.—*Improvement in Buckles*.—Patent dated July 24, 1860.—This improvement consists in making the buckle of two pieces of wire, of any suitable kind of metal, by swaging them into shape, and then putting them together so that the tongues will rest across the shanks of the bow part.

Claim.—As a new article of manufacture, the combination of the tongue part with the bow part, when the whole is constructed for use substantially as described.

No. 29,271.—JOSEPH F. HAMILTON, of Pittsburgh, Pa.—*Improvement in Pumps for Steam Engines*.—Patent dated July 24, 1860.—This invention consists in the use of a stopper, or regulating valve, placed in one of the receiving ports of the cylinder of the engine, for the purpose of regulating the power used for lifting and forcing the plunger of the pump.

Claim.—The use of the stopper or regulating valve *i*, when placed in the receiving port *h*, and used as described, and for the purpose set forth.

No. 29,272.—B. B. HOTCHKISS, of Sharon, Ct.—*Improvement in Projectiles for Rifled Ordnance*.—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the tapering body B, and the corresponding form of the belt D, in combination with the cap piece F *f*, or its equivalent, for the purpose of expanding D equally and to a definitely controlled extent at each end, substantially as set forth.

Second. Causing the edge of the cap F to embrace a portion of the belt D, so as to lock and confine D at that edge, substantially as and for the purposes shown and described.

Third. The combination of the lip C, at the forward edge, with the means herein described of confining the rear edge of the belt D, for the purpose of retaining the parts of the latter between them when burst open or otherwise fractured, as set forth.

No. 29,273.—JULIUS HORNIG, of Newark, N. J.—*Improvement in Window Sash Fastenings*. Patent dated July 24, 1860.—This invention consists in the use of an eccentric fitted within a suitable plate, so arranged and applied to the sash as to effect the desired result.

Claim.—The combination of the eccentric C, and plate D, applied to the sash B, and arranged relatively with the stile *d* of the frame A, to operate as and for the purpose set forth.

No. 29,274.—M. W. HELTON, of Bloomington, Ind.—*Improved Machine for Registering Fares*.—Patent dated July 24, 1860.—This invention consists in arranging a slide, connected with a rotary shaft, in such relation to a series of movable stops that, by means of said stops, the amount of motion given to the slide is regulated, thereby rotating the shaft one, or more, or only part of a revolution; also, in combining with said slide two series of stops, each to be operated independent of the other, and one to indicate the number of cents from 10 to 100, and the other the number of dollars, in combination with a registering apparatus in such a manner that, by adjusting said stops, the motion given to the rotary shaft, by means of the slide, can be regulated to correspond to any given sum of money, and to register the same.

The inventor says: I *claim*, first, the arrangement of a slide E, or its equivalent, in combination with a rotary shaft F, and stops *d*, or their equivalents, constructed and operating substantially as and for the purpose described.

Second. Combining with the slide E two series of stops *d* and *i*, and a series of registering wheels K L M N, or their equivalents, substantially as and for the purpose specified.

No. 29,275.—GEORGE Z. HOCKENBURY, of Pittsburgh, Pa.—*Improvement in Machines for Dressing Mill Stones*.—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The main, or power shaft *c*, having the screw *f*, the intermediate shaft *q*, and tubular crank shaft *r*, with the tool holder *k*, and table *h*, as they are arranged and operated for giving the tool the vertical and feeding motions, as set forth.

No. 29,276.—C. E. L. HOLMES, of Waterbury, Conn.—*Improvement in Forming Seamless Tubes*.—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The process described for making seamless tubes, which consists in casting the metal with a thin metallic strip in its centre and then rolling the same, in the manner and for the purpose shown and described.

No. 29,277.—JOEL W. HOPPER, of New York, N. Y., assignor to E. G. ALLEN, of Boston, Mass.—*Improved Low Water Detector for Steam Boilers*.—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Forming in the pipe *n*, that communicates with the boiler, an air chamber or space between the water in the said tube and the fusible plug, as set forth and for the purposes specified.

No. 29,278.—ENOCH HIDDEN, of New York, N. Y.—*Improved Portable Water Closet*.—Patent dated July 24, 1860.—This invention consists in the employment, in connection with any suitable vessel, of a sealing impervious removable lid, and also in the use, in connection with both of these devices, of a removable seat piece.

Claim.—The combined arrangement of the hinged lid *D* with the flanch *s*, the rubber packing *a*, and bucket *L*, with the removable seat piece *S*, the whole constructed and operating as specified, for the purposes set forth.

No. 29,279.—JOHN HENRY, of Lynchburg, Va.—*Improvement in Pressing Tobacco*.—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The construction and arrangement of a series of frames and moulds, so fitted and placed together that a large quantity of tobacco may be flattened or milled between thin boards or plates into bars or plugs, by one set of plungers, as described, for the purposes specified.

No. 29,280.—THOMAS HARVEY and NICHOLAS J. BEEKER, of Amsterdam, N. Y.—*Improved Horse Power Brake*.—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The self-operating brake of endless chain horse powers, which consists of the knuckle *F* and the trip lever and pulley *G*, worked by the driving belt.

No. 29,281.—CHARLES W. ISBELL, of New Haven, Conn.—*Improved Gas and Water Pipe Joint*.—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the wedge-shaped cavity, the shoulder *F*, and the upper and lower openings of the socket *A*, with the wedge-formed portion of the pipe *B*, the semi-circular or other projection *D*, the recess formed between the end of the pipe *B* and the shoulder *F*, the whole arranged substantially as specified, for the purpose set forth.

No. 29,282.—E. JACOBS, of Cincinnati, Ohio.—*Improvement in Iron Prisons*.—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Constructing and arranging plate iron cells in jails separately from each other, with vertical spaces *e* between the cells upon the same level, and horizontal spaces *f* between cells arranged one above the other, substantially as and for the purpose described.

No. 29,283.—BARTON H. JENKS, of Philadelphia, Pa.—*Improved Pattern Chain for Looms*.—Patent dated July 24, 1860.—This invention consists in dispensing with the wheel entirely and operating directly upon the chain itself. This is accomplished by making the outer surface of the chain a series of cogs.

Claim.—The use of a pattern chain *B B*, constructed with teeth upon its outer surface and operated directly by the pawl *D*, the whole being arranged and operating substantially as set forth.

No. 29,284.—W. F. JOHNSON and W. R. JOHNSON, of Wetumka, Ala.—*Improvement in*

Bridle Bits.—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A bridle bit, composed of two bars A A crossed and connected by a joint or fulcrum *a*, provided with buttons *c c* and a spring *f*, to operate as and for the purpose set forth.

No. 29,285.—A. M. KARR, of Mount Pleasant, Iowa.—*Improvement in Mole Ploughs.*—Patent dated July 24, 1860.—To remove the mole and coulter from the ground, the bolts *b b* are withdrawn and one of them passed through the hole in the upper end of the coulter B¹, when, as the beam A is drawn forward, the bolt in the end of coulter B¹ will be caught in the ears I I and the mole will then swing back and be easily drawn to the surface of the ground.

The inventor says: I *claim*, first, the combination, with the mole B, of the inclined side pins *c c*, bottom groove *e*, and margin *e*¹, top groove *d*¹, and margins *d*, and rolling heel E, arranged in relation to each other as shown and described.

Second. I claim the combination of the closing scoop C, with the coulter B¹, and the scoop mole D, constructed and arranged in relation to each other as and for the purpose set forth.

No. 29,286.—SAMUEL B. LAWRENCE, of Hookstown, Pa.—*Improvement in Machines for Shocking Corn Stalks.*—Patent dated July 24, 1860.—This invention consists in the use of a peculiarly shaped three legged bench, one of the legs of which is hinged to the bench top, a windlass, hinged brace board, and a movable bar, that is placed transversely through the bench top, with a suitable cord or rope.

Claim.—The combination and substantial arrangement of the movable frame D, roller E, brace arm H, bar J, with the bench A, having one jointed leg C, as set forth, for the purpose specified.

No. 29,287.—JOHN PARKER LINDSAY, of New York, N. Y.—*Improved Cartridge Cases.*—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—As a new article of manufacture, the cartridge case made with its chambers for receiving several charges, in combination with the discharging tubes or passages, when the whole is combined, arranged, and fitted for use, substantially as described.

No. 29,288.—EDWARD LANDIS, of Baltimore, Md.—*Improved Rocking Propeller.*—Patent dated July 24, 1860.—This invention consists in securing a hobby horse upon a carriage with wheels and connecting the two in such a manner that the rocking of the horse will propel the carriage.

Claim.—The arrangement of the rockers E, with the wheels B¹, the connecting rod *c*, the crank F and platform A, so that the motion produced by the rocking is converted into a rotary motion to propel the whole machine, substantially as and for the purpose specified.

No. 29,289.—JOHN McDERMOTT, of Washington, D. C.—*Improvement in Couplings of Thills to Axles.*—Patent dated July 24, 1860.—This invention consists in an improvement in attaching shafts of carriages to the clips.

The inventor says: I *claim* the end washers *e e*, upon the shoulders or sleeves *d d*, of the shaft iron head, as set forth.

I also claim the curved segmental shoulders or guards *m m* on the lugs of the clip, in combination with said end washers and sleeves *d d*, as set forth.

No. 29,290.—HENRY MASON, of Lancaster, Mass.—*Improvement in Cotton Presses.*—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Combining the platen shaft, or any equivalent shaft, with the driving shaft, or any equivalent shaft, by means of increasing and decreasing gears, substantially as and for the purpose specified.

No. 29,291.—JAMES MONTIETH, of New York, N. Y.—*Improvement in Globes.*—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The employment, in combination with a terrestrial globe, of one or more figures attached to the centre thereof by one or more elastic cords or springs of proper length to pass through the shell of the globe and hold the figure or figures against the external surface thereof, substantially as and for the purpose specified.

No. 29,292.—JAMES MONTIETH, of New York, N. Y.—*Improved Method of Suspending School Globes.*—Patent dated July 24, 1860.—This invention consists in a certain mode of combining a suspended cord with the divided globe, whereby it may be suspended either in an open or a closed condition, and kept in either condition by means of said cord.

Claim.—The combination, with the globe constructed in hemispheres and hinged together, as described, of two rings or staples *a a*, and a suspended cord *b*, applied as specified, for the purpose set forth.

No. 29,293.—JOEL B. MORRIS, Ansonia, Conn.—*Improvement in Machines for Polishing Cabinet Work*.—Patent dated July 24, 1860.—This invention consists in combining with a suitable carriage that is capable of receiving a rectilinear reciprocating motion, a movable frame carrying a roller, over which passes an endless band and a yielding pressure roller that is hung in the movable frame, and constructed in such a way that it will act upon the endless band that has an emery surface and keep the band in contact with the stuff that is passed under it, however uneven may be the varnished substance.

Claim.—The combination of the travelling carriage B, movable roller frames G G, and levers I I, when the same are arranged in the manner and for the purposes set forth.

No. 29,294.—ROBERT MORRISON, of Rahway, N. J.—*Improved Coupling of Thills to Axles*. Patent dated July 24, 1860.—This invention consists in an improved mode of attaching carriage shafts to the clips.

Claim.—The combination of the swivel loop *b*, the spring latch *c*, and the clip *a*, in the manner set forth.

No. 29,295.—CYRUS MARSH, 2d, of Natchez, Miss.—*Improved Cracker Machine*.—Patent dated July 24, 1860.—In this invention the frame A supports, at its upper part, a sloping chute board B, leading to a pair of horizontal rollers C, immediately beneath which are the stamping cylinder D and pressure cylinder E. The stamping cylinder consists of a drum whose periphery is studded with marginal formers or cutters F, having the shape desired for the crackers, and being sharpened on their salient edges. In operating the machine, the dough being placed upon the chute B, it is pushed forward so as to pass between the rollers C, whence it passes in a slab of suitable thickness between the rollers D and E, the roller E acting to press the dough into the forms from which the crackers are afterwards expelled by the followers and fall upon the carrier Q.

Claim.—The described arrangement of the rollers C, stamping cylinder D, pressure cylinder E N O, scraper P, and the carrier Q; the said parts being constructed, combined, and operating in the manner and for the purposes set forth.

No. 29,296.—GEORGE W. MARTIN, of West Morrisania, N. Y.—*Improved Sub-Marine Operator*.—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of an apparatus for operating under water by means of a tube or well passing through the centre of a vessel, or near it, to the bottom, for the purpose of searching or working on the ground beneath, substantially in the manner and for the purposes set forth.

No. 29,297.—RICHARD MOHLER, of Lancaster, Pa.—*Improvement in Smut Machines*.—Patent dated July 24, 1860.—This invention consists in placing in the upper part of the arch of a smut machine, or rather grain separator, a chamber, so constructed and arranged that the screenings shall be separated from the scourings, dust, and other impurities.

Claim.—Placing in the arches of smut machines or other grain separators, a chamber, constructed as described, and when operating substantially as specified.

No. 29,298.—GEORGE R. MOORE, of Pittsburgh, Pa.—*Improvement in Fire Pokers*.—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The use of the bars *a a*, or their equivalents, to prevent the poker from clamping.

No. 29,299.—H. W. NORVILLE, of Livingston, Ala.—*Improved Wagon Brake*.—Patent dated July 24, 1860.—This invention relates to an improvement in that class of brakes which are termed self-acting, being connected with the draught pole in such a way as to be acted upon by the momentum, or gravity of the vehicle, or the backing of the team.

Claim.—The combination of the draught pole D, and lever E, the latter being connected with the brake bar G, and all arranged to operate as and for the purpose set forth.

No. 29,300.—DAVID H. NATION, of Albany, N. Y.—*Improvement in Stove Grates*.—Patent dated July 24, 1860.—This invention consists in suspending the spindle, or shaft cast to the grate, in two loops, or elongated bearings, which are secured by means of bolts to a circular frame surrounding said grate, and are made of sufficient length to allow the spindle or shaft to reciprocate freely horizontally, their upper edges being made thin to lessen friction and prevent dirt or cinders from lodging thereon.

The inventor says: I claim, first, the loops or elongated bearings E E, in combination with the reciprocating shaft or spindle D, substantially as and for the purpose specified.

Second. I claim the sliding plate F, when used in combination with the elongated bearings E, and the shaft or spindle D, substantially as and for the purpose specified.

No. 29,301.—DAVID S. NEAL, of Lynn, Mass.—*Improved Fire Escape Attachment of Horse Stalls*.—Patent dated July 24, 1860.—C is a hollow iron pipe running from the outside of the building along the edge of the feeding troughs. D D D D are smaller hollow curved pipes connecting the main pipe C and sliding in and out of two holes in the top of each of the clamps B, for the purpose of securing and loosening the two strings E.

The inventor says: I *claim* the use of the main pipe C, and the pipes D D D D, constructed as described, and operating in connection with the lever F, in the manner and for the purpose set forth.

I also claim the whips I I I I, in connection with and operated by the rod H, and the crank K, in the manner and for the purpose set forth.

No. 29,302.—GEORGE NEILSON, of Boston, Mass.—*Improvement in Coffee Pots*.—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the combination and arrangement of the receiving tunnel F, its valve G, and weighted lever H, or its equivalent, with the cafetiere or the cover of its coffee holder, the same being for the purpose and to operate as described.

I also claim the combination and arrangement of the safety valve *b*, and opening *w*, with the tunnel, its valve, and weighted lever, applied to the cafetiere, as stated.

No. 29,303.—JACOB PRINGLE, of Sumner Hill, Pa.—*Improved Mode of Obtaining Motive Power*.—Patent dated July 24, 1860.—This invention consists of a bucket wheel hung within a cistern containing water, a fire place attached to the cistern, and a blowing apparatus, with a pipe, to convey the air to the bucket or wheel.

Claim.—The bucket wheel C, cistern A, fire place D, blowing apparatus G, and the air pipe E, the whole being constructed, arranged, and operating as and for the purposes set forth.

No. 29,304.—WILLIAM S. PRATT, of Williamsburgh, N. Y.—*Improved Compensating Lever Spring*.—Patent dated July 24, 1860.—This invention consists in the production of a spring, which is most sensitive when sensitiveness is most required, that is when the pressure is the least, and which has an increasing sustaining power as the pressure or weight is increased, and which is also simple in construction and not liable to get out of order.

Claim.—The arrangement and combination of the levers A A¹ and B, substantially as and for the purposes set forth.

No. 29,305.—JACOB MARSH PERKINS, of Chicago, Ill.—*Improvement in Water Wheels*.—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Attaching the buckets *g* to the side piece of the wheel by the pins *x*, and arranging them upon the wheel, as set forth, in combination with the breast and under-shot chutes as described.

No. 29,306.—GEORGE PALMER, of Littlestown, Penn.—*Improvement in Adjustable Carriage Springs*.—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Placing India rubber, or an equivalent yielding substance, between elliptic springs for vehicles, and a similar substance on the top of the bolster or rocker, or underneath the axletree, in combination with a regulating screw and hand or thumb nut; all arranged substantially as and for the purposes specified.

No. 29,307.—WILLIAM P. PARROTT, of Boston, Mass.—*Improved Steam Pressure Gauge*.—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the insulation case or chamber B with the compound bar R, and the space chamber or device for generating or holding the steam; the whole being arranged substantially in the manner and to operate as described.

No. 29,308.—CHARLES T. PANGBORN, of Brooklyn, N. Y.—*Improved Alarm Water Gauge for Steam Boilers*.—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the flange E at the bottom of the float, which slides up and down on the stationary valve rod C, and which operates in combination with the valve B, spring D, and disk *c*, substantially as and for the purpose set forth.

No. 29,309.—BARTON PICKERING, of Dayton, Ohio.—*Improvement in Cocks*.—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the combination of the hollow stem H, float valve P, and box

L, with concentric partition N, when the whole are constructed to operate substantially as described, for the purposes set forth.

I claim, in combination with a hollow valve stem, a whistle, so arranged as to be operated or sounded by the air issuing from the barrel through the cock, substantially as described.

In combination with the hollow valve stem, I claim the adjustable pipe Q, provided with a packing, so that it may be adjusted higher or lower in the valve stem as specified.

No. 29,310.—E. P. RUSSELL, of Manlius, N. Y.—*Improved Pawl and Ratchet*.—Patent dated July 24, 1860.—On the lower end of the pawl B, where it is attached to the shaft, there is a slot so that it fits down on the shaft, allowing the shaft to revolve in it; where the pawl fits on the wheel there is a catch that fits into the teeth of the wheel A for the purpose of operating it.

Claim.—The pawl B and lever D combined, being composed of one piece of metal, operating substantially as described, and for the purposes set forth, of giving feed or other motion

No. 29,311.—SAMUEL RING, of Cleveland, Ohio.—*Improvement in Straw Cutters*.—Patent dated July 24, 1860.—This invention relates to the peculiar motion of the knife and the manner of feeding the machine.

Claim.—The sash C, crank F, connecting rod G, pin H, guides E, and arm I, as described, the several parts being constructed and arranged in relation to each other and to the feed rollers, and operating in the manner and for the purpose set forth.

No. 29,312.—S. H. RANSOM, of Albany, N. Y.—*Improvement in Stoves*.—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, combining with the fire chamber and the usual oven at the back thereof, an inclosed roasting chamber, in front of the fire chamber and over what is the usual fire hearth, by extending the top and sides as far forward as the usual hearth plate, and enclosing the front; all substantially as and for the purposes specified.

And I also claim, in combination with the enclosed roasting chamber, and with the main oven back of the fire chamber, and with the flues to heat the same, the forming of flue spaces over the top and under the bottom, connected by diving flues at the sides, substantially as and for the purposes specified.

I also claim the arrangement of the air chamber, to which air is supplied from the room which is interposed between the fire chamber and the enclosed roasting chamber over the fire hearth, in combination with a horizontal perforated partition in the said air chamber and above the apertures for the admission of air, that the air to be heated may be distributed along the whole length of the said air chamber, so that when heated it shall escape from the upper part thereof in a sheet into the roasting chamber, and thence pass down, and thence to the ash pit to supply combustion as described.

And I also claim, in combination with the enclosed roasting chamber and double plates interposed between them, the making of one of the said plates, with apertures governed by a damper or register, to regulate the heat for roasting, substantially as specified.

No. 29,313.—J. M. ROBERTS, of Plaisance, La.—*Improved Mode of Detaching Horses from Vehicles*.—Patent dated July 24, 1860.—This invention consists in the combination and relative arrangement of a swingletree g, vertical cockeyes c, cockeye pins a, lifting bars r, cord f, and tube h, for the purpose of enabling the driver to detach the horse or horses from the swingletree instantaneously whenever it shall be desirable.

The inventor says: I *claim*, first, the combination and relative arrangement of swingletree g, vertical cockeyes c, cockeye pin a, lifting bar r, cord f, and tube h, substantially as and for the purpose set forth.

Second. The combination of a perforated tongue n and perforated crab iron o, crane j, bolt i, cord h¹, and tube t, with the swingletree g, vertical cockeyes c, cockeye pin b, lifting caps or bars r, cord f, and tube h, substantially as and for the purposes set forth.

No. 29,314.—HENRY E. ROGERS, of South Manchester, Conn.—*Improved Candlestick*.—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The construction and application of an elastic or spring thimble d, secured within the upper end of the candlestick a or cap c, substantially in the manner as and for the purpose described

No. 29,315.—JAMES T. SMITH, of Portsmouth, Va.—*Improvement in Machines for Threshing Peas and Beans*.—Patent dated July 24, 1860.—This invention consists in the employment of rotating beaters, in connection with a stationary slotted plate, and a fan arranged for joint operation to effect the desired end.

Claim.—The rotating beaters f, and stationary slotted plate G, combined with the fan I,

and arranged in a suitable frame A, in relation with the hopper H and box C, to operate conjointly as and for the purpose set forth

No. 29,316.—GERARD SICKELS, of Roxbury, Mass.—*Improvement in Water Meters*.—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The employment of the four puppet valves C C D D, arranged upon one shaft within a pipe or chamber having four partitions $e e^1 f f^1$ against the sides of which said valves are alternately seated, in combination with the piston K, all substantially as shown and described for the purpose set forth

No. 29,317.—JAMES SADLER, of Egremont, Mass.—*Improved Coupling for Thills to Axles*.—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the application, to the bolt connecting the shafts or pole of a carriage with the band or clip attached to the axle, of a pair of hooked clasps, contrived to shut over and encircle such bolt, which bolt may be permanent (allowing sufficient play, merely, for the raising and lowering of the shaft or pole wherewith said clasps are permanently connected) and kept in place by a band and spring, by means of which the whole may be securely held, or, if desired, may be readily detached.

No. 29,318.—ALEXANDER SCHWANINGER, of Milwaukee, Wis.—*Improvement in Apparatus for Generating Gas*.—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The retort box, constructed with the ribs, and arranged within the retort as described, in combination with the arrangement of the pipes, whereby the retort and pipes are entirely surrounded by heat, the tar allowed to flow down, and the retort box or any one of the pipes can be removed without disturbing the other parts as set forth.

No. 29,319.—ISAAC R. SHANK, of Buffalo, Va.—*Improved Flour Chest*.—Patent dated July 24, 1860.—This invention is an improvement in the combined biscuit board and chest, for which letters patent were granted on the 25th of July, 1859, in which the parts are made more simple and less expensive.

Claim.—The arrangement, as shown and described, of the biscuit board H, movable board H¹, angular supports D, ventilators G, partitions C, box A, and hinged top B.

No. 29,320.—SYLVESTER STEVENS, of Sacramento, Cal.—*Improved Hay Press*.—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The entire machine, together with the combination and application of the lever and pulleys, as set forth in the specification and the annexed drawings, for the purpose of pressing hay, cotton, and hemp, to be known as "Stevens's compound pulley and lever press."

No. 29,321.—SUMNER SARGENT, of Watertown, Mass.—*Improvement in Lamps*.—Patent dated July 24, 1860.—This invention consists in dividing the air chamber or perforated lamp top, below the deflecting cone, into compartments.

Claim.—The combination of the perforated lamp top A, partition plates b , and deflecting cone B, substantially as and for the purpose set forth.

No. 29,322.—ISAAC S. SAUNDERS, of Trenton, Mich.—*Improved Method of Applying Fusible Metallic Plugs to Steam Boilers*.—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the conical plug seat j , when formed on an elevated semi-spherical base l , in combination with the hollow screw rod n , in the manner and for the purpose described.

Second. The combination of the cap m with the hollow screw rod n , plug seat j , and semi-spherical base l , in the manner and for the purpose described.

Third. The peculiar mechanism described of arranging and combining the tube t with the plug seat j of semi-spherical base l and screw rod $n m$, for the purpose set forth.

Fourth. The use of the head v and the cap r , for holding a seal to detect any carelessness on the part of the engineer, as set forth.

No. 29,323.—JOHN SCHATT, of Philadelphia, Pa.—*Improvement in Gas Meter*.—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Making the frame A with a projecting extension $l l$ around the outer edge, substantially in the manner and for the purpose set forth and described.

No. 29,324.—JOHN SCHLEY, of Savannah, Ga.—*Improvement in Lamps*—Patent dated July 24, 1860.—This invention relates to a lamp for burning coal oil, and consists in a combination of parts arranged in such a way as to supply the flame with a requisite quantity of oil and oxygen, so as to obtain a brilliant illuminating flame.

Claim.—The combination and arrangement of the tubes B C D, with the two wicks E K¹, button J, and body A, with or without the shade and chimney L, as and for the purpose set forth.

No. 29,325.—JAMES W. SHIPMAN, of Springfield Centre, N. Y.—*Improvement in Mowing Machines*.—Patent dated July 24, 1860.—The pawl K has a pin *e* attached to it, which pin passes through a curved slot *f*, in the inner side of the drum J, and admits of the pawl being readily adjusted in or out of gear with the ratchet; when the pawl is engaged with the ratchet I, the wheel F will rotate the shaft H, the reverse being the case when the pawl is not engaged with the ratchet.

Claim.—In combination, with the ratchet I, pawl K, and drum J, the intermediate plate *d*, and spring *a*, arranged and operated in the manner described, for the purpose specified.

No. 29,326.—D. E. SOMES, of Biddeford, Me.—*Improved Heel for Boots and Shoes*.—Patent July 24, 1860.—This invention consists in the employment, with a metallic heel, of the stiffener C and the flange D to which the sole is attached, both being formed upon the heel.

Claim.—The combination of the stiffener C and the flange D with the metallic heel A, the same being connected and used substantially as and for the purpose specified.

No. 29,327.—J. C. STODDARD, of Worcester, Mass.—*Improvement in Teeth for Scattering Hay*.—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the employment of teeth B that are made with a straight tip and a boss or swell in front, which is presented to the grass, as shown and described, thereby preventing the gathering of the grass, and causing it to be thoroughly scattered, all as set forth.

I also claim the employment, in combination with said teeth and the bar *c*, of the grooved angular fastening plates A, provided with eyes *a*, as and for the purpose set forth.

No. 29,328.—CHARLES N. TYLER, of Washington, D. C.—*Improvement in Gas Generators*. Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the generation of illuminating gas by the heat of the burner which consumes the same, when constructed as described, the flame serving the purpose of illumination and at the same time heating the retort or retorts, substantially as set forth, for the purpose specified.

Second. I claim enclosing the retort or retorts within a heater through which the draught passes, for the purpose of concentrating the heat and thus producing a gas generating temperature from the illuminating flame, substantially as set forth.

Third. I claim placing the end of the gas escape tube C at the hottest point of the retort or in the focus of heat, for the purpose of superheating a small jet of gas as it escapes to the burner, substantially in the manner and for the purpose set forth.

Fourth. I claim regulating the heat by the relative adjustment of the flame and heater, for the purpose of controlling the amount of illuminating flame, substantially as described.

Fifth. I claim the combination of stop cock G with the tubes A and C, for the purpose of admitting the flow of fluid directly to the burner, or conducting the same to the heater K, and bringing the gas to the burner, substantially as set forth.

Sixth. I claim the revolving burner D, in combination with the heater K, and the retort or retorts, substantially as set forth, for the purpose specified.

Seventh. I claim the peculiar mode of packing the stop cock B by means of the level or levels compressing the cord or other fibrous packing upon the stem of the cock, substantially as set forth, for the purposes described.

No. 29,329.—LOVIUS D. TOWSLEY, of New York, N. Y., and E. MATTESON, of Brooklyn, N. Y.—*Improved Motive Power*.—Patent dated July 24, 1860.—This invention consists in the construction and operation of a motive power.

The inventors say: We *claim*, first, the weighted lever F, placed in position as shown, in combination with its connections at top and bottom, arranged and operated for the purpose set forth.

Second. The combination of the oscillating frame K, general frame A A A, side levers M M, and pendulum weights N N, when the same shall be arranged and operated as set forth and for the purpose specified.

No. 29,330.—B. W. TABER, of Quaker Street, N. Y.—*Improvement in Chimneys*.—Patent dated July 24, 1860.—The top A is provided with an adjustable cap B, which is simply a plate or an inverted shallow dish, provided with pendants *a*, projecting down within the top and secured therein by pins *b* passing through holes in the pendants and the sides of the top.

Claim.—The arrangement and combination, with the top A, of the internal horizontal portion *c*, vertical pipe *d*, flange *e*, and air space *f*, as and for the purpose shown and described.

No. 29,331.—CYRUS B. THAYER, of Boston, Mass., assignor to CHARLES ROBINSON, of Cambridgeport, Mass.—*Improved Chain Shot Battery*.—Patent dated July 24, 1860.—The object of this invention is to produce a battery of perfectly, equally, and readily adjustable barrels, which will be always sure to be fixed precisely at the same moment.

Claim.—Adjusting the two barrels, in respect to each other, upon a common axis, nearly or exactly in which is located a common vent for firing the two charges exactly at the same moment, substantially as and for the purposes specified.

No. 29,332.—JOHN TIEBOUT, of Brooklyn, N. Y.—*Improvement in Buckles*.—Patent dated July 24, 1860.—This invention consists in the arrangement of a serrated plate, or ratchet, made adjustable on a strap by means of a stationary tongue, in combination with a tooth-edged loop, in such a manner that the strap can be adjusted to any desired length, and its two ends fastened together simply by sliding the loop over the ratchet, which latter prevents the same from sliding back, and retains it the more tenaciously the stronger the strain is on the rack.

Claim.—The arrangement of the adjustable ratchet plate A, in combination with the tooth-edged loop C, constructed and operating in the manner and for the purpose specified.

No. 29,333.—JACOB W. TRUAX, of Richmond, Vt.—*Improvement in Water Wheels*.—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the auxiliary bucket L, on the inclined rim *f*, in connection with the conical rim A, attached to the flanch C, the parts being arranged relatively with each other, to operate as and for the purpose set forth.

Second. The employment or use, in connection with a draught tube B, of a valve F, placed in such relation with the penstock, to operate as and for the purpose set forth.

Third. The arrangement of the penstock D, flanch C, draught tube B, and cross bars or bridge trees J, as shown and described, to render the wheel and parts pertaining thereto very accessible for repairs.

No. 29,334.—JONATHAN VAILE, of Miami, Ohio.—*Improvement in Steam Boilers*.—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination and arrangement of the flat vessels C C C, the steam chamber D, the smoke stack B, and the furnace and fire spaces K K; the whole being constructed and used substantially as and for the purpose specified.

No. 29,335.—ANDREW J. VANDERGRIFT, of Saint Louis, Mo.—*Improvement in Grain Separators*.—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the plates *f* and bearings *f*², forming the perforated and corrugated spiral ledge, with bolts or rods *f*¹, passing through and securing them to the rim or flanch *d*, of concave J, with perforated and corrugated lining *e*, combined to form the revolving cylinder *e*², communicating with opening *o*, arranged relatively with cylinder K¹, and operated in the manner and for the purpose set forth.

Second. The hollow cast iron longitudinal sections *g*, filled with stone *m*, in connection with the longitudinal perforated sections *h*, and loose or movable curbs or sections *g*^{*}, combined and arranged relatively with semicircular flanches *f*^{*} *f*^{*}, all forming a cylinder K¹, and arranged relatively with cylinder *e*, and communicating with chute *n*, and trunks *k k*, to operate as and in the manner set forth.

Third. The hopper and deflector H, and the deflector *a*^{**}, dividing the current in the flues G and M, and throwing half on each side through openings in the side passages *p p*, all being constructed and arranged substantially as and for the purpose specified.

Fourth. The cross bar *e*^{**}, by which the lower end and slip joint of tube I may be adjusted laterally, as well as up and down, as desired, when arranged as set forth.

Fifth. The flues P, chamber L, flues M and G, in connection with side passages *p p*, deflectors H *a*^{**}, and trunks *k k*, arranged relatively with each other, the fan and fan box N, the scouring apparatus, and shafts B E, to operate as and for the purpose set forth.

No. 29,336.—JOHN W. WOOD, of Watertown, N. Y.—*Improved Edge Tool Sharpener*.—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, as a new article of manufacture, the edge-tool sharpener, produced in the manner substantially as described, the same being made of steel, cast iron, or other suitable metal, in one piece of a prismatical or other form, having three or more faces, such faces presenting different degrees of superficial roughness in the grain or texture of the metal, whereby one and the same instrument may be adapted to the various uses or purposes, as set forth.

No. 29,337.—GEORGE B. ARNOLD, ABBY H. PRICE, and ABBY S. URNER, of New York, N. Y., assignors to themselves and A. and J. S. ARNOLD of the same place.—*Improved Fluting Apparatus*.—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim*, first, the fluting device described, consisting of the fluting rods B C C, heating flame *m*, spring *h*, and treadle D *d*, or their equivalents, arranged and operated substantially as set forth.

Second. Adjusting the heat-receiving points *e e e*, relatively to the working surfaces of the iron, substantially in the manner and for the purpose set forth.

No. 29,338.—JAMES BINGHAM, of Philadelphia, Pa., assignor to F. D. BINGHAM, of the same place.—*Improved Surge Reliever for Cables*.—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—As an improved article of manufacture, a surge reliever, consisting of a chain, having each of its links composed of two stirrup bolts or links *a a*¹, the limbs of which are interposed; their ends passing through heads or plates *b b*, and secured from withdrawal by nuts *c c*, the heads being separated by a block of rubber A, through which the links also pass, all as shown and described.

No. 29,339.—GEORGE C. BARTLETT, of Paris, N. Y., assignor to DAVID M. OSBORN & Co., of Auburn, N. Y.—*Improvement in Potato Diggers*.—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination of the shovel or digger and shaker, one arranged immediately in rear of the other, so that the shaker shall receive from the shovel all that the shovel digs up, and sift or riddle it, throwing the potatoes on top, substantially as described.

I also claim suspending and vibrating the shaker from and around a point, pivot, or pin *b*, that is high enough above the ground not to be interfered with by the dirt, vines, weeds, &c., substantially as described.

No. 29,340.—ROSWELL F. COOK, of Potsdam, N. Y., assignor to himself, FRANK G. JOHNSON, of Brooklyn, and M. J. WHITMORE, of Potsdam, N. Y.—*Improvement in Breech Loading Fire Arms*.—Patent dated July 24, 1860.—This invention consists in providing an adjustable attachment of the barrel A of the pistol to the stock or breech B, so as to render it possible and easy to keep the barrel always tightly fitted and firmly held to the stock or breech, however much the contact surfaces may wear away by use.

Claim.—The combination of the prolonged nut G with the screw H, or their equivalents, acting upon each other, substantially in the manner and for the purposes as set forth.

No. 29,341.—HORATIO F. HICKS, of Grand View, Ind., assignor to HICKS BROTHERS, of the same place.—*Improved Cotton and Hay Press*.—Patent dated July 24, 1860.—The claim and engravings explain the nature of these improvements.

The inventor says: I *claim*, first, in combination with the nut screw and piston of a cotton or hay press, the described, or a substantially equivalent arrangement of inclined planes M M¹, operating to elevate and depress the follower N during the retrograde rotation of the screw, substantially as and for the purpose set forth.

Second. The combination of the follower N, and rod O O¹, constructed and operating in connection with the inclined planes M M¹, substantially as set forth.

Third. The flanges T, applied within the box to prevent the return of the cotton, as set forth.

Fourth. The described construction and arrangement of self-supporting L-shaped doors C C¹, for the purpose explained.

No. 29,342.—JOHN B. HAY, of Winslow, N. J., assignor to HAY & Co., of the same place.—*Improvement in Glass Furnaces*.—Patent dated July 24, 1860.—This invention consists of three compartments with inclined bases, certain partitions with openings near the base, and certain inclined side openings; the whole being arranged within the walls of a glass furnace, in respect to its benches, so that the glass which escapes from the crucibles may find its way

into the central compartment, from which it may be withdrawn in a state free from all admixture with ashes and other refuse prior to being again deposited in the crucibles.

Claim.—The three compartments G G¹ and H, with their inclined bases, the partitions I I, with their openings *a a* near the base, and the inclined side openings *i i*, the whole being arranged within the walls of the furnace in respect to the benches D D, as and for the purpose set forth.

No. 29,343.—CHARLES HUGHES, of New Orleans, La., assignor to himself and HENRY FASSMAN, of the same place.—*Improved Punching Machine.*—Patent dated July 24, 1860.—This invention relates to certain improvements in machines for punching metal plates, and is more especially designed for making hook locks for connecting or fastening the ends of metal bale hoops.

Claim.—The arrangement and combination, with the shaft B, in the manner and for the purpose shown and described, of the adjustable wedge K, lever L, wedge R, lever U, eccentrics H H¹, arbor J, wedge M, dies N O, punches P, plate Q, box S, and wedge T, all as set forth.

No. 29,344.—NATHAN C. LEWIS, JR., of Boston, Mass., assignor to himself and EDWIN BRUCE, of the same place.—*Improvement in Boots and Shoes.*—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement and application of separate metallic guards, with respect to the main leather outer sole of a shoe, and a gutta percha or caoutchouc outer sole, substantially in manner as described.

No. 29,345.—MARTIN SHIRK, of Lancaster County, Pa., assignor to himself, S. B. HARTMAN, and WENDEL MARTZALL, of the same place.—*Improvement in Machines for Dressing Millstones.*—Patent dated July 24, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the open pick shaft A, with its socket R, adjusting screw F, peg E, and spring S, in combination with the shouldered screw burrs D¹ D² on the screw shafts N¹ N², and their pinions 5 and 7, operated by means of the pinion 1 on the cam shaft, and pinions 2 and 4 on the elbowed shifting lever T, substantially as and for the purpose specified.

No. 29,346.—ELIJAH D. WILCOX, of Bellingham, Mass., assignor to himself and G. D. NOURSE, of Cambridgeport, Mass.—*Improvement in Grain Cradles.*—Patent dated July 24, 1860.—This invention consists in so connecting the brace rods D, which hold the fingers in their required position with respect to the distance from the snath, with the snath, that the ends of these rods may not project beyond the back of the snath and incommode the person using the cradle.

Claim.—The bent rod *h* projecting from the snath towards the fingers C, substantially in the manner and for the purpose specified.

No. 29,347.—JAMES ADAIR, of Pittsburgh, Pa.—*Improvement in Lamps.*—Patent dated July 31, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement and combination of the adjustable tube E, wick F, containing the small central tube *g*, tube D, provided with the disk *a*, and valve *b* at its bottom, and perforated below the disk, to communicate with the fountain C, the thimble G, and burner or tube H, substantially as and for the purpose set forth.

Second. The hood L, fitted to the perforated cylinder I, and rendered adjustable by means of the cylinder K, in connection with the deflecting lips M and the peculiar shaped orifice of the burner or tube H, for the purpose specified.

No. 29,348.—HENRY A. ALDEN, of Matteawan, N. Y.—*Improved Lacing for Belts.*—Patent dated July 31, 1860.—The claim and engravings explain the nature of this invention.

Claim.—As a new and useful article of manufacture, strips of woven material coated with an India rubber, gutta percha, or other suitable cement, that, while scarcely or not at all sticky to handle, is firmly adhesive on being subjected to pressure, substantially as specified, and applied as a belt or band lacing, as described.

No. 29,349.—JOSIAH ASHENFELDER, of Philadelphia, Pa.—*Improved Journal Box for Railroad Cars.*—Patent dated July 31, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, making the bottom of a journal box, whether fixed, movable, or supplementary, to incline downward from the sides and under the axle, for the purpose of reducing the quantity of lubricating material to be employed, and more effectually presenting it to the axle.

Second. The box A, in combination with the adjustable back B, bearing D, loose bottom E, cap F, and collar G, substantially as described, and for the purpose of an easy removal of the parts for inspection, cleaning, and removal.

No. 29,350.—MINER H. BACON, of Mystic, Conn.—*Improvement in Machines for Dressing Millstones*.—Patent dated July 31, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement of the band wheel G, sliding frame E, sleeve E¹, spring J, and suitable means for adjusting the tension of J and suspending the spindle K, by turning G, substantially as set forth.

Second. Operating the stop T by the pawl N, substantially in the manner shown, for the purpose of seizing and holding up the cutters by a slight motion of the wheel G, whatever may be the tension of the spring.

Third. The slide R, spring U, slide T, and grooved spindle F K, in combination with the shifting device M N *et c.*, or its equivalent, substantially as and for the purpose set forth.

Fourth. The arrangement of the spring U, in connection with the double slide R T and band wheel G, substantially as shown, for the purpose specified.

No. 29,351.—HARMON L. BENNETT, of Long Branch, N. J.—*Improvement in Machines for Covering Potatoes*.—Patent dated July 31, 1860.—This invention consists in the arrangement of a double mould board, adjustable to any desired angle with the beam, so that the earth is gathered into a row from two furrows, and covers the potatoes or other articles planted to any desired depth, according to the inclination of the covering mould boards.

The inventor says: I *claim* the triangular mould board *f*, provided with the shares *k k* and *i*, and adjustable, relatively to the beam *a*, by the bars *g h*, substantially as and for the purposes set forth.

And, in combination with the aforesaid triangular mould board, I claim the harrow *l*, attached to the bar *m* and to said mould board *f*, in the manner and for the purposes specified.

No. 29,352.—CORNELIUS BERGEN, of Farmer, N. Y.—*Improvement in Grain Separators*.—Patent dated July 31, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination of the fingers 4 4, receiving the grain from the first carrier, the rake 5 6 7, and the carrier 11, substantially as and for the purpose set forth.

Second. The arrangement of the rake 5 6 7, in connection with the vibrating bearings 8 8, and crank shaft 9, in the order and manner described, that is to say, the crank shaft being placed between the rake head 6 and the vibrating bearings, by which a greater and more perfect agitation of the straw and clearance of the rake is secured by means of the greater vertical than horizontal motion given to the rake.

No. 29,353.—LEWIS R. BILLARD, of Norfolk, Va.—*Improvement in Ratchet Drills*.—Patent dated July 31, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the shank B, the box A, the screw D, the ring *c*, the spring *a*, and the handle H, the screw D passing into the shank, a portion of the shank passing into the box, with the spring *a* intervening between them, and the handle H being secured to the box, as represented; the whole being combined, constructed, and operated as and for the purpose specified.

No. 29,354.—WILLIAM H. BISHOP and AUGUSTUS H. LOW, of Warren, Mass.—*Improvement in Devices to Prevent Horses from Cribbing*.—Patent dated July 31, 1860.—The claim and engravings explain the nature of this invention.

Claim.—So combining the pivotted or hinged guard D with the strikers *l*, through the arms *h* and clutch *r*, as that any attempt to grasp the top of the guard will throw up the strikers, and give the horse a blow on the nose, and thus cause him to desist from any attempt at cribbing, as set forth and explained.

No. 29,355.—J. H. BOARDMAN, of New York, N. Y.—*Improvement in Steam Boilers*.—Patent dated July 31, 1860.—This invention consists in the arrangement of a central neck connecting a horizontal plain cylinder boiler and a vertical tubular boiler, in combination with a flue surrounding said vertical boiler, in such a manner that the vertical cylinder shall be suspended when set, and the heat from the furnace pass under the horizontal boiler, which forms the top, or covering of the furnace; thence down, through, and around the vertical boiler, whereby a large amount of heating surface is obtained.

The inventor says: I *claim*, first, the arrangement and combination of the circular central neck E, horizontal boiler A, vertical tubular boiler F, and surrounding drop flue G, operating substantially as and for the purpose specified.

Second. The combination with the vertical tubular boiler F, of a mud box K, constructed and operating substantially in the manner and for the purpose specified.

No. 29,356.—NATHAN BRASHER, of Green's Fork, Ind.—*Improvement in Bee Hives*.—Patent dated July 31, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the metallic ribs and metallic bottom within the moth drawer, as and for the purpose shown and described.

No. 29,357.—JAMES BROOKS, of Romulus, N. Y.—*Improvement in Ditching Ploughs*.—Patent dated July 31, 1860.—The inventor says: To use this plough I adjust the ground wheel, or pulley, at about four inches above the bottom of the share, and pin it fast; the guide bar I also place above ground at first; I then cut a furrow, and coming back on the opposite side of the ditch already begun, I cut again, follow, and throw out the dirt; I then change the clevis so as to alter the point of traction, and cut deeper, and alternate as before, so going on until the ditch is finished.

Claim.—The combination and arrangement of the guide bar and coulter share, substantially as described and set forth.

No. 29,358.—THOMAS H. BURRIDGE, of St. Louis, Mo.—*Improvement in Steam Ploughs*.—Patent dated July 31, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the gang of ploughs S S S, with the described drum and engine, in the manner described.

No. 29,359.—JOHN H. CLIFF, of Rochester, N. Y.—*Improved Register Point*.—Patent dated July 31, 1860.—This improvement consists of a press point that can be moved with accuracy in any direction within a given space.

Claim.—The application to Adams's printing presses, or any other description of printing presses to which they may be adapted, points that can be moved in any desired direction within a given space, by the means and in the manner described.

No. 29,360.—LORING COES and AURY G. COES, of Worcester, Mass.—*Improved Machine for Heading Screw Wrenches*.—Patent dated July 31, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim*, first, the combination of the anvil block O, side dies c c, gauge p, and hammer die e, for the purpose of forming and heading the blanks of screw wrenches, substantially as described.

Second. We claim, in combination with the hammer die e, and the anvil block, a gauge for defining the relative positions of these parts, with regard to the blank, for the purpose of "paring" down the thin part of the jaw of the wrench blank, substantially as described.

Third. We claim, in combination with a hinged catch g, the foot lever or treadle K, for catching and holding up the hammer, substantially as described.

Fourth. We claim, in combination with the catch and its sliding piece l, a tripping arm on the cam, so that the hammer, when tripped, will not fall upon the cam, substantially as described.

No. 29,361.—J. U. COVEL, of Bangor, Me.—*Improved Harness Buckle*.—Patent dated July 31, 1860.—The claim and engravings explain the nature of this invention.

Claim.—As an improved article of manufacture, a buckle having a frame a, loops a c, and tongue d, arranged and constructed as shown and described.

No. 29,362.—FLORIAN DAHIS and FREDERICK DOREMER, of Brooklyn, N. Y.—*Improvement in Catamenial Bandages*.—Patent dated July 31, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A menstrual instrument, composed of a cup B, springs D E, and a main or girding spring A, the parts being made and confined as shown and described.

No. 29,363.—JOHN DAIN, of Utica, Ohio.—*Improvement in Composition for the Preservation of Timber*.—Patent dated July 31, 1860.—This liquid is composed of common salt, ley, and spirits of turpentine.

Claim.—The mode of preserving wood from rotting, by means of the described composition being inserted therein, as described, or in any other way.

No. 29,364.—JOSEPH H. DAVIS, of Woburn, Mass.—*Improvement in Warming Apparatus*.—Patent dated July 31, 1860.—This invention consists in using a series of flues and radiators

so divided by diagonal, horizontal, fixed, swinging and vertical partitions and valves, to be moved by rods, or shackle jointed levers, or their equivalents as to form, when the combined arrangement is in use, a double or reverse draught flue.

Claim.—The combination and use of the horizontal reverse draft flue K K, with the fixed partition H, its swinging partition N, and jointed lever I, and two vertical partitions S S, and their valve U, together with the inclined partition A, as combined with the radiator R, when arranged and combined in the manner and for the purposes specified.

No. 29,365.—JOSEPH DESNOS, of Troy, N. Y.—*Improved Horse Shoe Machine.*—Patent dated July 31, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination of the segmental roller A, and friction roller A¹, with the cutters B B¹, the whole being arranged and operating together as described, to intermittingly feed in and cut off the heated iron bar.

Second. I also claim the combination of an intermittingly revolving anvil E, provided with a series of equi-distant female shoe dies of moulds *f*, each having a core *g*, which projects beyond the mould, as described, with a vibrating die or hammer D, and a pair of vibrating jaws C C; the whole arranged and operating together substantially as described, to bend and swage the pieces of the heated iron bar into the form of the shoes.

Third. I also claim the reciprocating creasing die H, when arranged and operating in combination with the intermittingly revolving anvil L, the hammer D, and the jaws C C, as described, to successively and automatically forge and crease the shoes.

Fourth. I also claim the combination of the vibrating nail hole punch I, with the intermittingly revolving anvil E, creasing die H, hammer D, and jaws C C, all arranged and operating together substantially as described, for the purpose of successively bending, swaging, creasing, and punching the shoes at one continuous mechanical operation.

Fifth. I also claim the vibrating tongue J, when arranged and operating as described, to discharge the shoes from the moulds of the intermittingly revolving anvil.

No. 29,366.—LEVI DISBROW, of Oswego, N. Y.—*Improvement in Apparatus for Destroying Vermin.*—Patent dated July 31, 1860.—Within the reservoir is the pipe *c*, which at its lower end extends through the rim C to the body of the bellows. By the action of the bellows wind passes through the pipe *c*, as well as through the projecting pipe *d*, and acts upon and forces down the substance in the reservoir.

Claim.—The combination of the pipes *c* and E, with the reservoir B, rim C, valve *a*, and bellows A, as and for the purposes set forth and described.

No. 29,367.—LOCKWOOD DRAKE and ELIAS HEWITT, of Marshall, Mich.—*Improvement in Smut Machines.*—Patent dated July 31, 1860.—This invention consists in the use of an auxiliary suction blast, by means of which the lighter particles of foreign matter are drawn off in advance of the wheat, through a peculiarly formed passage which connects the interior of the scouring cylinder or concave with the interior of an independent blower case; also, of an improved construction of the spiral lips of the beater wings and the use of an additional dropping board in the main farming mill.

Claim.—The use of the auxiliary fan blower P² in combination with the semi-annular passage O, when applied substantially in the manner and for the purposes described.

No. 29,368.—EZRA EMMERT, of Franklin Grove, Ill.—*Improvement in Cultivators.*—Patent dated July 31, 1860.—This invention consists in the combination, with an ordinary shovel plough or cultivator, of a wheel, rotating on the side of the plough, and provided with hoes on its edge, for the purpose of preventing the plough from covering the growing plants as it is drawn forward, and also for the purpose of giving steadiness to the plough and enabling the attendant to guide it more readily, and, at the same time, for the purpose of digging up and pulverizing the soil around the roots of the growing plants.

Claim.—The combination, with an ordinary shovel plough or cultivator A, of the rotary wheel F, furnished with hoes *b*, and operating in the manner and for the purpose specified.

No. 29,369.—BENJAMIN FITTS, of Worcester, Mass.—*Improved Planing Machine.*—Patent dated July 31, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement of the screw O, the hanger N, the box M, and the spring R, in combination with the dimension planer, when constructed and operating substantially as set forth.

Second. I claim so hanging or fastening the stand by which the pressure roll is attached to the cylinder frame D in such a manner, that the pressure of the roll on the board will serve to hold or bind the cylinder frame more firmly to the sides or posts, substantially as described.

Third. I claim hanging the pressure bar S in such a manner, that its pressure upon the board will cause it to hold the cylinder frame D more firmly to the slides or posts, substantially as set forth.

Fourth. I claim so forming and hanging the pressure bar S, or its mechanical equivalent, that the backward motion of the carriage will raise the cylinder frame D so as not to plane or mark the board while running back.

No. 29,370.—ELISHA FRENCH, of Braintree, Mass.—*Improvement in Apparatus for Rescuing Horses from Fire*.—Patent dated July 31, 1860.—This invention consists in a combination and arrangement of devices, whereby a person standing at the door of a barn or stable, however remote from the stall, by pulling a rope or chain, may instantly not only unhitch a horse but also lead him out.

Claim.—The combination and arrangement of the rope H, spring latch D, connecting chain f, halter ring g, and sliding bolt C, substantially as described and for the objects specified.

No. 29,371.—FREDERICK GARDINER, of Gardiner, Me.—*Improvement in Mowing Machines*. Patent dated July 31, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination of a hollow cutter bar G, set inclined downward from its rear edge, circular plane edged overlapping cutters or shears J J, cogged gearing I I N, for actuating said cutters J, longitudinal shoe K with slotted standards c c, two castor wheels L L, long vertical pinion M for receiving and transmitting the power, vertical guide pins L¹ L¹, swing frame O O¹, toothed driving wheel C¹ D, and intermediate pinions S T, substantially as and for the purposes set forth.

Second. So combining the cutter bar G, with all its attachments, with the main frame A and the gearing thereof by means of vertical pins L¹ L¹ and a swing frame O, having a swivelling bar O¹, or by equivalent devices, that the cutting apparatus may be thrown out of gear, and also, when desirable, the cutter bar, with all its attachments, may be entirely disconnected from the main frame, substantially as set forth.

No. 29,372.—P. W. GATES, of Chicago, Ill.—*Improvement in Casting Stamping Heads*.—Patent dated July 31, 1860.—This invention consists in the use of a hollow central chill in combination with an external chilled metal flask, so that the metal which, with the central chill, forms the stamp head or die, may be cast in and around the central chill, and against the interior surface of the external chilled flask.

Claim.—The use of a hollow central chill in combination with an external chilled metal flask, in the manner substantially as and for the purposes described.

No. 29,373.—JUSTUS GRIGGS, of Utica, N. Y.—*Improved Machine for Making Screws*.—Patent dated July 31, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The employment of a movable gauge plate, substantially as described, in combination with the transferring fingers, substantially as described, for gauging the screw blanks by the head when the blanks are inserted in the gripping jaws, as set forth.

No. 29,374.—IRA HART, of Clarksburg, Va.—*Improvement in Machines for Threshing and Cleaning Grain*.—Patent dated July 31, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the scrapers k which sweep the lower screen, when constructed with three sides and arranged as shown, for the purpose set forth.

Second. The combination of a stationary adjustable straw arrester N with a swinging one M in the cap O of the machine, as set forth.

No. 29,375.—DAVID HINMAN, of Berea, Ohio.—*Improved Mode of Forming the Centre for the Shaft of Grindstones*.—Patent dated July 31, 1860.—The claim and engravings explain the nature of this invention.

Claim.—An apparatus for making the eye of a grindstone concentric with its periphery by means of the screws D, studs L, and the pin K, which pin is placed in the rough eye of the stone, and in the centre of the circle formed or bounded by the circumference of the stone, and filling the rough eye around the pin K with some plastic cement, through which the crank shaft is subsequently inserted, substantially as described and for the purposes specified.

No. 29,376.—WILLIAM HOFFMIRE, of San Francisco, Cal.—*Improvement in Apparatus for Boiling and Distilling*.—Patent dated July 31, 1860.—The furnace contains above the fuel grate l another grate k for the reception of sad irons; the cover E of the furnace is made double, so as to contain hollow spaces between its top and bottom, which are to be filled with water; this water space communicates with two pipes V V which may lead to a reservoir in which water may be heated by being in contact with the boiling water in the hollow space of the cover E; the cover E is also provided with suitable holes for the insertion of cooking utensils.

Claim.—The combination of furnace A, water jacket compartments r s, circulating pipes

t u, and regulating cocks *O O*, with two boilers *B C* and double cover *E*, all constructed in the manner and for the purposes set forth.

No. 29,377.—JAMES JACKSON, JR., of Westerly, R. I.—*Improvement in Oil Cans*.—Patent dated July 31, 1860.—A shows the body and *B* the nozzle of the can; the nozzle is divided into two parts *M* and *N* by the partition *C*; the part *M* is open to the oil in *A* at *M*¹; the part *N* is extended by a small tube, which tube is open at each end, and extends down into the body of the can nearly to its bottom.

Claim.—The oil passage *M*, hollow space *N D*, open at each end, and vent tube *E*, combined and arranged substantially as and for the purpose set forth.

No. 29,378.—E. CURTIS JENKINS, JR., of Springfield, Mass.—*Improvement in Skates*.—Patent dated July 31, 1860.—The claim and engravings explain the nature of this invention.

The inventor says; I *claim* the two clamp plates, made to fit within a recess in the upper part of the foot rest, and to clasp the sole of the boot alone, in connection with a leather strap and buckle to pass over the foot and confine it down upon the foot rest, the protecting plate *l*, and the sustaining screws *k k*¹, the particular object of the clamp plates in my invention being to bring the foot of the wearer either to one side or the other of the centre of the iron runner, and to prevent any lateral slipping of the foot on the foot rest, in manner and for the purpose as described.

I also claim the peculiar construction of the underside of the runner *B*, with its narrow groove *m*, on its inner edge, and its wide, flat, or convex bearing surface *n*, essentially in manner and being made to operate as described.

No. 29,379.—JOSEPH E. JOHNSON, of Brockport, N. Y.—*Improved Device for Heating Smoothing Irons*.—Patent dated July 31, 1860.—The bottom board *A* consists of a piece of sheet zinc of the form of the smoothers, and should be a little larger than the stand *C*, with a piece of board one fourth of an inch thick and one inch and a half wide across the broad end on the under side, and another piece of the same thickness and width, lengthwise, through the centre, from the pointed end back to the cross piece in the form of a cross; the object of these pieces is to keep the zinc up from the table.

Claim.—The arrangement of the revolving plate *H* and smoothing irons *K K*, substantially as and for the purposes specified.

No. 29,380.—W. F. JOHNSON and J. DOYLE, of Wetumka, Ala.—*Improved Blind Slat Machine*.—Patent dated June 31, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim*, first, the adjustable tooth rack *R*, constructed substantially as shown, to wit, the teeth *i* being fitted loosely in a grooved plate *I*, and adjusted through the medium of the eccentric segments *j*¹, bar *K*, and bars *m*¹, or their equivalents, for the purpose of varying the length of the spaces between the mortises and holes of the slides, as set forth.

Second. The combination of the adjustable tooth rack *R*, and the auger arbor *C*, when operated simultaneously through the medium of the sliding bar *F*, slotted plate *H*, pawl *m*, and treadle *G*, arranged substantially as and for the purpose set forth.

Third. The reciprocating arbor *O*, provided withawl *g*², in connection with an adjustable tooth rack *R*, for the purpose specified.

Fourth. The endless belt *T*, arranged relatively with a hopper *S*, and provided with hooks *t*¹, in connection with the curved stripping plate *w*¹, for the purpose of taking the staples from the hopper, and feeding them to the staple driver *W* as described.

Fifth. The arrangement of the bar *X*, to which the driver *W* is attached, cylinder *Z*, provided with arms *x*¹, the stationary projections *x*², in the box *V*, together with the spring *y*¹ *z*¹, to give the lateral motion to the driver, to admit of the staples passing below it to be driven as set forth.

No. 29,381.—WILLIAM JOHNSON and H. WANSBRAUGH, of Cincinnati, Ohio.—*Improvement in Cooking Stoves*.—Patent dated July 31, 1860.—The oven is entirely surrounded by flues, namely, a lower flue *F*, which commences between the plate *A* and *B*, passes back beneath, and ascends to the stack behind the oven, and an upper flue *G*, which passes directly over the oven to the chimney; *H* is a damper which extends entirely across the stove. *I* is a door, by means of which the flue *F* may be cleaned and air admitted thereto when needful to regulate the heat or draft.

Claim.—The arrangement of the grate *C*, arching fire and oven plates *A B*, flues *F G*, and damper *H*, constructed and combined in the manner and for the purposes set forth.

No. 29,382.—JACOB H. KALB, of Charleston, S. C.—*Improvement in Street Lights*.—Patent dated July 31, 1860.—This invention consists in suspending a reflecting lamp in the centre of cross streets by means of rods or bars which extend up from the four corners of the street.

Claim.—The employment of the lamp D, provided with gas burners F F and reflectors G G, when the same is used in connection with the gas pipe E, posts A, and the rods or bars C C, and the whole arranged as and for the purpose specified.

No. 29,383.—WILLIAM A. KEELER, of New York, N. Y.—*Improvement in Preserving Food.*—Patent dated July 31, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The use of two casks with the intermediate filling of plaster, when they are so arranged that the inner cask shall be perfectly insulated by the plaster, substantially as and for the purpose specified.

No. 29,384.—SAMUEL M. KING, of Lancaster, Penn.—*Improved Steam Cross-Cut Sawing Machine.*—Patent dated July 31, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, pivoting the guide frame *a*, which bears the steam cylinder *b* and the cross-head of the saw, at a point intermediate between the steam cylinder and the cross-head of the saw.

Second. In combination with such mode of pivoting the frame, I claim arranging the feed movement so that it shall operate at the point of suspension of frame *a*, as set forth.

Third. Supporting the steam cylinder and the entire framework upon the two uprights *c c*, as set forth.

No. 29,385.—JACOB KINZER, of Pittsburgh, Pa.—*Improved Sausage Stuffer.*—Patent dated July 31, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* constructing a sausage stuffer with a body or box, having its interior the shape of the sector of a cylinder, and having a pressing flap hinged or pivoted at the centre of the cylinder, of which the body is a sector, substantially in the manner and for the purposes described.

I also claim combining with a body and pressing flap, such as described, a nozzle opening into one of the radial sides of the sectional body or box, at an acute angle thereto, so as to present a large opening for the passage of the meat without increasing the diameter of the nozzle substantially as described.

No. 29,386.—ERNST KIRSCH, of New Haven, Conn.—*Improved Carriage Body.*—Patent dated July 31, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The construction of the crooked or curved body, when no more than two pieces are used to compose the two sides of the body and the seat rail, while the fibres of the timber always run in the direction of the curves or sweeps, so that no part is in any degree cut across the grain of the timber, and the whole is constructed and fitted for use substantially as described.

No. 29,387.—HENRY KURTH, FLORIAN DAHIS, and CHARLES ROBITAILLE, of Brooklyn, N. Y.—*Improved Tobacco Box.*—Patent dated July 31, 1860.—This invention consists in arranging the bottom of the box together, with a sweep attached to the same in such a manner that the same rotates around a central pin, and that the tobacco in the box can be compressed between said sweep and a stationary radial partition, which is secured to the body of the box, by a direct positive pressure.

Claim.—The arrangement and combination of the revolving bottom B, sweep *d*, stationary body A, and partition *a*, constructed and operating substantially as and for the purpose specified.

No. 29,388.—E. W. LACY, of Oak Park, Va.—*Improvement in Hemp Brakes.*—Patent dated July 31, 1860.—This invention consists in the novel construction and combination of the parts.

The inventor says: I *claim*, first, the employment, in combination with the crushing rolls C C¹, and striker roll D, of an inclined reciprocating separator F, the whole arranged and operating as specified, for the purpose set forth.

Second. I claim the combined arrangement of the crushing rolls C C¹, striker roll D, guide rest E, inclined separator F, and discharge apron P, the whole constructed to operate as specified, for the purpose set forth.

No. 29,389.—Z. W. LEE and E. D. LEE, of Blakely, Ga.—*Improvement in Cultivators.*—Patent dated July 31, 1860.—This invention consists in combining a plough beam and three angle irons, with a cutter *c*, plough share, and plough brace.

Claim.—The combination of a plough beam *b*, and three angle irons *e e*¹, *e e*¹, *e e*¹, with a cutter *c*, plough share *d*, plough brace *i*, clamps *g*, and wedges *h*, when constructed and arranged in the manner and for the purposes set forth.

No. 29,390.—ARBA C. LEWIS, of Burlington, Mich.—*Improvement in Fruit Drying Apparatus*.—Patent dated July 31, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement and combination, in the manner shown and described, of the elevating platform C, fruit racks J, bars F, endless band I, with the shaft D, pulleys E b b, lifting ropes a c, and house A, so that, by turning the shaft D, the fruit will be raised and carried out of the house and exposed to the sun and air; and on reversing shaft D, the fruit will be again deposited within the house, all as set forth.

No. 29,391.—W. C. LOSTUTTER and S. WOLCOTT, of Rising Sun, Ind.—*Improvement in Cultivators*.—Patent dated July 31, 1860.—The side of the beam A is pivotted to an arm G, which passes through a laterally adjustable stirrup G¹, and projects down at right angles, and is secured to a guard plate K; from the rear of the plate K proceeds back a vertically adjustable wing L, which may be raised or depressed, according to the depth it is desired to plough, and set in its adjusted position by a nut c.

Claim.—The arrangement of the adjustable clamp G¹, swinging arm G, guard K, wing L, beam A, brace rod E, standard B, pivotted handle D D, cross brace D¹, sector plate a, and strap b, as and for the purpose shown and described.

No. 29,392.—AMOS D. LUFKIN, of Cleveland, Ohio.—*Improvement in Preparing Hides*.—Patent dated July 31, 1860.—This invention relates to a compound that acts specifically upon the hair glands, so as to loosen the hairs without injury to the parts of the skin, which is left in such a soft and natural state that, by washing or soaking it in water for a few hours with the usual working of the beam, the ordinary process of bating may be dispensed with.

Claim.—The composition made as set forth, and for the purpose described.

No. 29,393.—P. MARTIN, of New Orleans, La.—*Improvement in Cotton Seed Hullers*.—Patent dated July 31, 1860.—The grooves, or furrows, between the knives a are adapted to give the seed a rolling motion. The concave B is made up of segments for the purpose or more readily adjusting it to the cylinder A.

Claim.—The employment of prismoidal reversible bar knives a, in combination with the scored hulling cylinder A, and scored concave B, as and for the purpose shown and described.

No. 29,394.—MATTHIAS McCONNIGLE, of Alleghany, Pa.—*Improvement in Bee Hives*.—Patent dated July 31, 1860.—This invention consists in an arrangement for removing the side of the inner chamber, or chambers, of the beehives, so that the frames in which the honeycombs are attached may be removed without injury to the bees or honeycombs. And also in the use of a double and perforated cover, for the purpose of ventilating the different compartments of the hive, and for preventing the queen from entering the upper compartment, or compartments, of the hive.

The inventor says: I *claim*, first, the use of the movable sides d, when used in connection with the inner chamber or chambers of the beehives, as described, and for the purpose set forth.

Second. The use of the double and perforated cover, when arranged and constructed as described, and for the purpose set forth.

No. 29,395.—J. P. MENDENHALL, of Farmington, Ill.—*Improved Car Coupling*.—Patent dated July 31, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The stock A, provided with the projections a a, and the cylindrical projection b, having the head c at its end, in connection with the bar B, having the bars C C attached to it by joints d, the spring D being between them, and provided at their outer ends with the jaws e e¹, and projections h h, substantially as and for the purpose set forth.

No. 29,396.—GEORGE MUNCE, of St. Louis, Mo.—*Improved Apparatus for Cleaning Windows*.—Patent dated July 31, 1860.—This invention is used by placing it in a room in front of, and near to, an open window, with the railing outside projecting two feet from the window and resting on the sill, and brought to a horizontal position on section B, and made fast by the screw C, the section E pressed against the ceiling, and made fast by screw G.

Claim.—The adjustable standard E B, in combination with the platform A, or its equivalent, when the same is operated substantially as described, for the purpose set forth.

No. 29,397.—JOHN PARK, of Joliet, Ill.—*Improved Churn*.—Patent dated July 31, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement of the bars E E, on the under side of the hinged lid of the churn, in combination with the revolving shaft of beaters, in the manner and for the purpose described.

Second. The conical gudgeon C, fitted in a conical seat and acted upon by the spring D, in the manner and for the purpose described.

Third. The hair-catching strips *d*, attached to the bars E, in the manner and for the purpose described.

No. 29,398.—JACOB M. PATTERSON, of Woodbury, N. J.—*Improved Construction of Lightning Rods*.—Patent dated July 31, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Making the lightning rod D, and waterspout or leader B, of one continuous piece of metal, so constructed and arranged that they will perform the double function of conductor and waterspout, as set forth.

No. 29,399.—EDWARD PEACH, of Utica, N. Y.—*Improvement in Awning Fixtures*.—Patent dated July 31, 1860.—Within the box B there is placed longitudinally a roller C, the box being sufficiently long to allow the roller to extend the whole width of the door or window. To this roller the upper end of the awning D is attached, and to one end of the shaft *a* of the roller the inner end of a coil, or barrel spring E is secured; the outer end of said spring being attached to the inner side of a cylinder F, which is fitted on the shaft *a*, and encompasses the spring E.

Claim.—The arrangement of the hinged struts H, plate G, hooks *i*, awning D, roller C, spring F, ratchet *e*, and pawl *f*, as and for the purpose shown and described.

No. 29,400.—JOHN G. PERRY, of South Kingston, R. I.—*Improved Meat Cutter*.—Patent dated July 31, 1860.—To construct this machine a case A is made, which is divided horizontally through its middle into an upper and lower part, for readily removing the knives and other internal parts, for the purpose of cleaning, &c. A shaft B is placed in the centre of the case, and lengthways of it, turning in bearings made in the ends of the case.

Claim.—The employment of the knives and pendants combined substantially as described and for the purposes set forth.

No. 29,401.—ABRAHAM H. PHILLIPS, of Reading, Pa.—*Improvement in Gas Regulators for Railroad Cars*.—Patent dated July 31, 1860.—The claim and engravings explain the nature of this invention.

Claim.—In combination with the plane disk, spring plates *a a*¹, and their inclosed space, the valve *e*, with its washer *f*, flat space *g*, and openings *h i*, for the purpose of regulating the flow of gas from the receiver to the burners, whatever may be the pressure upon the gas, substantially as herein described and represented.

No. 29,402.—JAMES RADLEY, of New York, N. Y.—*Improvement in Lamps for Locomotives*.—Patent dated July 31, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the division of the oil reservoir, by means of horizontal diaphragms or partitions, into several shallow compartments or sub-divisions, substantially as described.

Second. The wash hole with its closing cap or plug, in combination with the horizontal compartments or sub-divisions of the reservoir, by means of which access is had at once to all the said compartments, substantially as set forth.

Third. In combination with the said horizontal compartments or sub-divisions, the oil duct or tube by which the oil is conveyed into the lowermost sub-division of the reservoir, together with the air vents chamber and its checks, by which the oil is retained while the air is permitted to pass out of or into the reservoir as required, substantially as described.

No. 29,403.—J. C. RAINBOW, of New Brighton, Pa.—*Improvement in Belt Trusses*.—Patent dated July 31, 1860.—This invention consists in a certain novel system of straps, employed in combination with the pads of a truss.

Claim.—The employment, in connection with the pads A A, of the straps *d d h h n k k l o o p p r r*, and connecting and adjusting buckles; the whole combined and arranged substantially as specified, or one pad only, when two are not necessary.

No. 29,404.—JOSIAH RENARD, of Lyons, France.—*Improvement in the Preparation of Aniline Colors*.—Patent dated July 31, 1860.—The inventor says: The preparation of the coloring matter referred to in my description, is based upon the discovery that if aniline be heated to a temperature of from three hundred and eighty to four hundred degrees Fahrenheit, together with certain chemical compounds which are either anhydrous, or perfectly dry or desiccated, the mixture thus produced will be changed into a substance of such dark color that it appears to be almost black, but which, when applied in their layers or diluted, is transparent and of a beautiful red color.

Claim.—Combining with aniline the metallic salts specified, or their equivalents, and treating the same in such a manner as to produce a red, in contradistinction to a purple or bluish coloring matter or dye, substantially as set forth.

No. 29,405.—JAMES ROGERS, of Santa Clara County, Cal.—*Improved Machine for Forming Stove Pipe.*—Patent dated July 31, 1860.—The claim and engravings explain the nature of this invention.

Claim.—In combination with a stove pipe forming machine, a box G, the diagonal corners $e e^1$ are bevelled, and a slip H, arranged in the manner and for the purpose set forth.

No. 29,406.—FREDERICK ROSS and FR. SPOEHR, of New York, N. Y.—*Improved Padlock.*—Patent dated July 1, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim*, first, the employment, for the purpose of retaining the padlock to a door, of a hooked pin A, passing through the keyhole of the ordinary lock and catching on the inner side of the same, substantially as and for the purpose specified.

Second. The arrangement and combination of the hooked pin A, sliding barrel C, locking plate E, hollow stem B, and spring catch h , constructed and operating substantially in the manner and for the purpose set forth.

Third. The combination, with the hollow stem B, and spring catch h , of a spring dog i , arranged substantially as and for the purpose described.

Fourth. The arrangement of a pin o , sliding in a hollow tube q , and in combination with the dog i , and catch h , constructed and operating as and for the purpose specified.

No. 29,407.—F. M. RUSCHHAUPT, of New York, N. Y.—*Improvement in Apparatus for the Manufacture of Vinegar.*—Patent dated July 31, 1860.—This invention relates to certain improvements in that class of manufacture of vinegar in which alcohol, by being brought in contact with the oxygen of the atmospheric air, is transformed into hydrous acetic acid or vinegar.

Claim.—The arrangement of the annular passages c , tube e , vessel B, pipe f , cask C, and tube g , in combination with the acidifiers A, constructed and operating substantially in the manner and for the purpose set forth.

No. 29,408.—SAMUEL T. RUSSELL, of Ottawa, Ill.—*Improvement in Rotary Engines.*—Patent dated July 31, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination of the flanged pistons, the piston boxes, the cavities 10 and $d d$ in the cylinder, and the passages $11, 12, 13, 14, 15$ in the cylinder and wheel, the whole operating substantially as and for the purpose specified.

Second. The plates G G, constructed and applied to the steam wheel substantially as described, and serving the double purpose of securing the same in the cylinder and of cams to operate the cut-off valves.

Third. The system of levers T U T* U*, applied in combination with the plates G G, and with the cut-off valves, substantially as described, to effect the operation of the said valves.

Fourth. In connection with the two sets of induction and eduction ports in the cylinder, the connected reversing valves N N¹ O* O*, constructed, applied, and operated as described.

No. 29,409.—JOHN B. SHAFER, of Grafton, Va.—*Improved Railroad Cattle Car.*—Patent dated July 31, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the combination, with the car body, of a raising and lowering middle deck proper and suitable hoisting machinery thereto, in such manner as that the car may readily be converted from a double decker into a single floor, cattle, or open space, or freight car, free from division into stall apartments or projecting arrangement of partitions into stalls, substantially as specified.

Also, the combination, with the raising and lowering middle deck to the car, of independent stalls or stall partitions hinged or otherwise equivalently connected to the car on opposite sides of it at opposite ends, and for operation in connection with the adjustable middle deck but distinct therefrom, substantially as and for the purpose or purposes specified.

No. 29,410.—D. L. D. SHELDON, of San Francisco, Cal.—*Improvement in Hernial Spring Trusses.*—Patent dated July 31, 1860.—The claim and engravings explain the nature of this invention.

Claim.—As a new article of manufacture, an abdominal truss combining, in its construction, a pad with a cushion A, and plate C, a compress or ball B, sliding plate D, and spring H, and applied in the manner and for the purpose set forth and described.

No. 29,411.—RUFUS SIMONDS, of Ludlow, Vt., and G. N. GOODSPEED, of Winchenden, Mass.—*Improvement in Machines for Making Wooden Bowls.*—Patent dated July 31, 1860.—

This invention consists in having the segment carriage to which the cutter is attached connected to an adjustable or sliding centre block, and having a supplemental cutter attached to the segment carriage by which, on adjusting the carriage after each bowl is cut, a flanch or rim may be cut thereon.

Claim.—Attaching the radius arm *G*, of the carriage *F*, to a sliding or adjustable block *H*, in connection with the auxiliary cutter *q*, attached to the carriage; all being arranged in relation with the mandrel *C*, and bolt *D*¹, to operate as and for the purpose set forth.

No. 29,412.—CHRISTOPHER SMITH, of Nauvoo, Ill.—*Improvement in Corn Planters*.—Patent dated July 31, 1860.—This invention relates to corn planters, by means of which a planter can be constructed capable of planting one or two rows at the same time.

Claim.—Operating the feed bar *k*, by means of the handles *d*, clevis *f*, and bent lever *g*, all being constructed and arranged substantially as described for the purposes set forth.

No. 29,413.—JESSE SPEER, of Hazlehurst, Miss.—*Improvement in Cotton Cultivators*.—Patent dated July 31, 1860.—The object of this machine is in the cultivation of cotton and other things that are planted in rows, in that manner known as "drilling," and when the plant is small, from its uses, the rows can be divided and made into hills, leaving the plants to grow in uniformly separated bunches or hills.

Claim.—The combination of the wheel *a*, hoe *h*, and bar *I*, arranged and operated as or substantially as and for the purpose set forth.

No. 29,414.—GEORGE S. G. SPENCE, of Boston, Mass.—*Improved Boiling and Condensing Apparatus*.—Patent dated July 31, 1860.—This invention consists in making a boiler and condenser with parallel double sides, in such a manner that the space between them shall be a capillary space to hold or sustain a liquid between the two sides according to the laws of capillary attraction, and that such capillary space may be maintained continuously charged with a ring of liquid during the operation of the boiler, and that the liquid so maintained may act as a water joint to prevent the escape of steam or other vapors from the boiler through said capillary space.

Claim.—The construction of the water joint by means of the combination of the side *a a*¹, with the side *b b*¹, in the manner and for the purpose substantially as set forth.

No. 29,415.—WALTER W. SPANARD, of Buffalo, N. Y.—*Improved Refrigerator*.—Patent dated July 31, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the air tube *F*, passing through or near the ice box *B*, and through the water tank *D*, and opening into the preserving room at its lower end, for the purposes and substantially as set forth.

No. 29,416.—GEORGE A. STANLEY, of Cleveland, Ohio.—*Improvement in Apparatus for Moulding Candles*.—Patent dated July 31, 1860.—This improvement relates to a circular arrangement of the candle moulds in a frame or box, by which a larger number of moulds can be arranged in a given space than in the ordinary way, and the ease and facility with which this improvement can be worked allows the candles to be made with more rapidity than when done by the ordinary means.

Claim.—The special arrangement of the moulds in a circular form, in combination with a frame or box suitable for the purpose, in the manner and for the purpose substantially as described.

No. 29,417.—HENRY SWEETAPPLE, of Napa, Cal.—*Improvement in Fan Blowers*.—Patent dated July 31, 1860.—The fan is formed of the flanges *B* and the circular centre piece or wheel *C*, with the blades *F*, the whole held together by the bolts *d*.

Claim.—The combination of two rings *e e* of flexible material, with the air chamber *a* and the sides *B B* of a fan blower, constructed as above set forth, in the manner and for the purpose described.

No. 29,418.—EDWIN C. THOMPSON and MILES B. WHEATON, of New York, N. Y.—*Improved Box for Silvering and Albuminizing Photographic Paper*.—Patent dated July 31, 1860. The claim and engravings explain the nature of this invention.

Claim.—Silvering or albumenizing photographic paper by means of a box fitted so as to be revolved or inverted, for the purposes and as set forth.

No. 29,419.—WILLIAM THOMSON, of Buffalo, N. Y.—*Improved Nail Brush*.—Patent dated July 31, 1860.—This invention consists in combining with a shallow flaring mouth cup, of a suitable diameter, a circular brush, which latter will consist of one, two, or more rows of

bristles, arranged in such a manner that the combination will form a neat and efficient article for cleaning the finger nails.

Claim.—The circular brush and cup combined, substantially in the manner and for the purposes set forth.

No. 29,420.—DANIEL J. VAIL, of Industry, Ill.—*Improvement in Seeding Machines.*—Patent dated July 31, 1860.—K K are covering shares, the front ends of which are attached to the upper parts of the coulter J, said shares extending back, one at each side of the furrow shares, and curving upward at their ends, the covering share of each furrow share being connected at their back ends j, and formed of a single piece of metal.

Claim.—The arrangement of the curved connected covering shares K K, furrow shares I I, tube i, coulter J, frame A, and box D, wheels a a, seat B, uprights G G, slide F, pins g, seats E, and bar H, as and for the purpose shown and described.

No. 29,421.—ISAAC VAN BUNSCHATEN, of New York, N. Y.—*Improvement in Vapor Lamps.* Patent dated July 31, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the relative arrangement of a supply tube V, inclined conducting tube A, inclined return tube B, a heater D a, a tubular burner I, regulating valve H, and air passages U U, substantially as and for the purposes set forth.

Second. The arrangement of the two inclined tubes A B, with respect to the heater D a, and single screw plug C of the heater D a, substantially as and for the purposes set forth.

Third. The arrangement of the conical screw plug or valve H, constructed with the cylindrical screw nut R, in combination with the lower end of the vapor burner, substantially as and for the purposes set forth.

No. 29,422.—AUSBENT H. WAGNER, of Staunton, Va.—*Improvement in Mills.*—Patent dated July 31, 1860.—This improvement consists in the construction and arrangement of devices which comprise a grinding mill.

Claim.—The combination of the hoop b, collar R, and case N¹, the whole being constructed and arranged substantially as described.

No. 29,423.—JOHN B. WANDS, of Memphis, Tenn.—*Improved Fabric for Roofing, Belting, &c.*—Patent dated July 31, 1860.—This improvement consists of a fabric of canvas, or other woven goods, saturated with what is known to manufacturers of stearic acid as residuary gum.

Claim.—As an improved article of manufacture, the within described fabric made of canvas and the residuary gum of stearic acid, as set forth.

No. 29,424.—CHAPMAN WARNER, of Brooklyn, N. Y.—*Improvement in Pumps.*—Patent dated July 31, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Adjusting the pump cylinder A at the proper height by means of the pendants q, slats c, and their attachments, as and for the purposes described.

No. 29,425.—FREDERICK W. WARNER, of East Haddam, Conn.—*Improvement in Mowing Machines.*—Patent dated July 31, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the frame extending in front of the main axle with the draft frame or thills, driver's seat, and cutting apparatus, the front end of the frame D serving as a treadle to elevate the cutting apparatus, and the several parts being constructed and arranged in the manner described.

No. 29,426.—JONATHAN WARREN, of Brooklyn, N. Y.—*Improved Pen Holder.*—Patent dated July 31, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The employment of an elastic tube C, constructed as described, in combination with the pen holder A, for the purpose of forming a shield for the pen.

No. 29,427.—LUTHER R. WATTLES, of Newton, Mass.—*Improvement in Looms.*—Patent dated July 31, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* my improvement in regulating the tension of the warp of a loom, the same consisting in so combining the yarn beam with friction apparatus, as described, that the gravitating power or weight of the yarn on the beam, as such power or weight may diminish during the unwinding of the yarn on the beam while the weaving process is being carried on, shall operate to decrease the friction on the beam.

I also claim the arrangement of the yarn beam and the lever of the above described friction apparatus, applied by gearing, or its equivalent, to the yarn beam, as described.

No. 29,428.—WILLIAM S. WILLIAMS, of Lynn, Mass.—*Improvement in Machines for Skiving Leather*.—Patent dated July 31, 1860.—This improvement consists in the peculiar arrangement of devices for holding, raising, or lowering the cylinder that rolls and presses on the leather, and regulates the thickness of the same when skived.

Claim.—The combination and arrangement, as described, of the bent wires F F, swinging frame D, slots *g g* and nuts *f f*, for the object specified.

No. 29,429.—HORACE WING, of Buffalo, N. Y.—*Improvement in Machines for Crimping Leather*.—Patent dated July 31, 1860.—This invention relates to the construction and arrangement of the machine, whereby the crimping bar can be operated with great convenience.

Claim.—The arrangement, with the frame A *a b c* and crimping jaws B B, of the pivotted crimping bar E, which has a toothed segment F on its front end, and the continuously revolving cog wheel H, in the manner and for the purpose described.

No. 29,430.—NATHAN AMES, of Saugus Centre, Mass., assignor to himself and EDWIN M. MONTAGUE, of Boston, Mass.—*Improved Index Door Plate*.—Patent dated July 31, 1860. The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the removable plate I, of ivory, porcelain, slate, or other material capable of being written upon with a pencil and the writing readily expunged, in combination with a suitable frame or door plate furnished with a glass protector G, and confining said removable plate by means of a spring bolt D, or its equivalent, passing through the door, substantially as set forth and for the objects specified.

Second. In combination with the above door plate, a rotating disk C, marked with the hours and parts of an hour, as shown in Fig. 2; said disk being confined in the centre to a spindle D, which passes through the door, substantially as and for the purpose described.

Third. The spring S, arranged, combined, and operating substantially as described.

No. 29,431.—THADDEUS FOWLER and DE GRASSE FOWLER, of Northford, Conn., assignors to the UNITED STATES PIN COMPANY, of Seymour, Conn.—*Improved Machine for the Manufacture of Pins*.—Patent dated July 31, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim*, first, the spring finger *i*, within the clamping jaws, for the purpose and as specified.

Second. The combination of the cutter 7, and toe 8, with the finger *i*, for carrying the headed pin out of the clamping jaws and delivering the same into the notched pin wheels *o o*, as set forth.

Third. A rolling bed, in combination with a stationary, resisting surface and cutter or cutters, when said cutter or cutters act on the same side of the shaft of the pin as the stationary surface against which the pin rolls in being pointed, for the purpose and as set forth.

Fourth. The notched pin wheels *o o*, and revolving and rolling bed *n*, constructed and operating substantially as set forth.

Fifth. The metallic strip *p*, kept at a proper tension by the lever 16, or its equivalent, and pressing the belt 17, on the pins, in combination with the rolling bed and notched plates, as and for the purposes specified.

Sixth. The arrangement of the reciprocating cutters *s s* and *t t*, combined with the rolling bed as described and shown.

No. 29,432.—GEORGE E. FREW, of Brooklyn, N. Y., assignor to WILLIAM RICHARDSON and JOHN RICHARDSON, of New York, N. Y.—*Improved Pen and Pencil Case*.—Patent dated July 31, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement, as shown and described, of the spirally slotted tube C, pencil slide B, upon the inside of tube C, and penholder tube E, upon the outside of tube C, so that the same tube C and the same spiral slot will move both the pen and pencil in either direction, as required, all as set forth.

No. 29,433.—F. A. GODDARD, of Lexington, Ill., assignor to himself and JOHN H. KENNADAY, of the same place.—*Improvement in Corn Planters*.—Patent dated July 31, 1860.—This invention relates to an improved corn planting machine of that class designed for planting either in drills or check rows.

Claim.—The arrangement of the shifting wheel H, on shaft G, with the permanent wheel F, on the axle C, in combination with the removable lever S, in shaft G, as and for the purpose set forth.

No. 29,434.—EPHRAIM L. HARLOW, of Monmouth, Me., assignor to WILLIAM G. BROWN, of the same place.—*Improved Pegging Jack*.—Patent dated July 31, 1860.—The lower end of the lever passes through the arm *c*, of a long spring F, which is arranged on the outside of the

post, and so as to extend beyond the same. The upper end of said spring is fastened to the post, or against a metallic cup, or ferule *d*, placed therein.

Claim.—The application or arrangement of the spring *F*, with respect to the post *A*. and the heel lever *D*, and so as to operate substantially as specified.

No. 29,435.—LEWIS JENNINGS, of Brooklyn, N. Y., assignor to himself and R. DICKINSON, of New York, N. Y.—*Improvement in Cotton Pickers*.—Patent dated July 31, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The employment of the spur wheel *D*, in combination with belts *E*, which pass between the spurs *a*, so that as the spurs sink between the belts, the cotton will be stripped from the spurs and left upon the belts, all substantially as shown and described.

No. 29,436.—ISAAC LINDSLEY, of Providence, R. I., assignor to himself and DANIEL F. TOMPKINS, of Newark, N. J.—*Improvement in Cigars*.—Patent dated July 31, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The hydraulicizing or condensation of tobacco to the highest possible extent into the form of a segar or other form suitable for smoking, Fig. *D*, when the tobacco so hydraulicized or condensed shall have, running in and through the same, the distinct aperture, a Fig. 2, or its equivalent, formed substantially in the manner and for the purposes described.

No. 29,437.—J. A. MATTHEWS, of St. Louis, Mo., assignor to himself and S. H. HEMP-HILL, of the same place.—*Improvement in Repeating Ordnance*.—Patent dated July 31, 1860.—The centre of the gun stock is of the nature of a plate, in the centre of which a trunnion *P*¹ *P*¹ is made, about which the breech *B* of the gun revolves upon an horizontal plane; and to secure the said breech firmly in its place a hole is made through its centre, through which the centre pin *A* is made to pass and screw into the trunnion, and as the said centre pin has a flange upon its upper end it keeps the breech from rising off the stock, as well as from moving laterally.

The inventor says: I *claim*, first, the use of the revolving breech *B*, when it is arranged horizontally and operated by means of the circular rack *Q*, pinion *Y*, and shaft *r*, arranged as shown and described.

Second. I claim the use of the cartridge receiver *e*, when it is arranged with reference to the revolving breech *B*, in the manner described.

Third. I claim the use of the rammer *f*, when it is arranged and operated with reference to the receiver *e*, and breech *B*, in the manner described.

No. 29,438.—SAMUEL MAN, of Chicago, Ill., assignor to HARRY T. MAN, of the same place. *Improved Ore Separator*.—Patent dated July 31, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The construction and arrangement of the conical elevating and discharging wheel *m*, to which is attached the receiving cylinder *B*, having spiral flanges and longitudinal wings on both the internal and external surfaces, in combination with the stationary cylinder and trough, substantially as and for the purposes specified.

No. 29,439.—SAMUEL MILLS, of New York, N. Y., assignor to himself and F. FRANCK, of San Francisco, Cal.—*Improved Elevator and Lock for Window Sashes*.—Patent dated July 31, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The application and arrangement of the supporting guide *b*, the rack *C*, pinion *E*, and stationery circular plate lock *F*, in combination with the spring crank handle and catch by which the sash is elevated or depressed, and is safely secured in the position it is left from the hand, substantially as specified, for the purposes set forth.

No. 29,440.—SALMON R. PLUMB, of Southington, Conn, assignor to the PECK SMITH MANUFACTURING COMPANY, of the same place.—*Improvement in Casting Cylinders for Meat Cutters*.—Patent dated July 31, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, making a pattern having protuberances or projections extending to different points from the centre, so as to withdraw the same from the mould while the hole is closed in the flask by means of proper mechanism, arranged within the pattern, substantially as set forth and described.

Second. I claim an improved manufacture of meat cutter cylinders, &c., produced by means substantially such as set forth and described.

No. 29,441.—LYMAN PLATT and RUSSELL WILDMAN, of Danbury, Conn., assignors to themselves and JAMES S. TAYLOR, of the same place.—*Improvement in Machinery for forming Hat Bodies*.—Patent dated July 31, 1860.—This invention consists in forming fur hats upon the inside of an inverted perforated or wire cone, lined with a removable lining of grass cloth or

any flexible material pervious to air. The fur is thrown out by the picker, and drawn into and held upon the inside of the cone and its lining by the exhausting fan; after the fur is deposited upon the said cone or lining, a second lining is placed on the inside of the hat by means of an expanding frame.

The inventors say: We *claim*, first, the forming of fur hats on the inner surface of an inverted perforated or wire cone, suspended through a revolving ring into an exhaust chamber, in the manner specified.

Second. We also claim the combination of a picker H, inverted perforated or wire cone C, shield K, and exhaust fan E, the whole combined and operating as described for the purpose as set forth.

Third. We also claim the expanding wire frame, constructed as described, for putting the lining within the formed hat for the purpose described.

No. 29,442.—OLIVER W. PRESTON, JR., and WILLIAM W. FARNHAM, of Corning, N. Y., assignors to themselves and PAYNE OLCOTTS, of said Corning.—*Improvement in Straw and Stalk Cutters*.—Patent dated July 31, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim*, first, the employment or use, on a cutting wheel C, of a straw and stalk cutter of zigzag ledges *h h*, in connection with a slide bar H, having a pawl *k* attached for the purpose of operating the feed rollers I, substantially as set forth.

Second. Attaching the knives or cutters E E to a sliding bar D, fitted to the wheel C in a way to be operated by the flanch G, attached to frame B, for the purpose of giving a drawing cut to the knives or cutters, substantially as described.

No. 29,443.—REUBEN SHALER, of Madison, Conn., and CALVIN B. ROGERS, of Deep River, Conn., assignors to C. B. and J. ROGERS, of Deep River aforesaid, and T. CHAMPION, of Jersey City, N. J.—*Improved Foot Cleaner*.—Patent dated July 31, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination, with a foot scraper, of the brushes 4 4, or either of them, placed contiguous to the ends or end of the scraper, upon axes or an axis placed crosswise of the line of the edge of the scraper, in such a manner that they or it may be rotated by the action of the foot in the operation of cleaning it substantially as described.

No. 29,444.—THOMAS SHAW, of Philadelphia, Pa., assignor to himself and L. NEY BROGNARD, of the same place.—*Improved Feeding Apparatus for Steam Boilers*.—Patent dated July 31, 1860.—This invention consists in the construction of a feeding apparatus which possesses the following requisite: It has no ground or packed joints that communicate with the outside to cause leaks, &c. A part of this invention is the peculiar construction of the body or stationary part through which the crank shaft passes.

Claim.—The arrangement of the body A, chamber B, disk K, and lap C, substantially as described, and the employment of the exhaust pipe D for the purpose specified.

No. 29,445.—DAVID SHERMAN, of Uniontown, Md., and ROBERT W. FENWICK, of Washington, D. C., assignors to D. SHERMAN and BERNARD MILLS, of said Uniontown.—*Improved Churn*.—Patent dated July 31, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Corrugating the surface of the nearly cylindrical churning chamber, diagonally or spirally, in the peculiar manner described, in combination with the blades *c c* of the dasher, which are set so as to stand across the diagonal or spiral corrugations, substantially as and for the purposes set forth.

No. 29,446.—JOSHUA TURNER, of Cambridgeport, Mass., assignor to himself, CALVIN P. HINDS, of Boston, and WARREN TILTON, of Beverly, Mass.—*Improved Oil Feeder*.—Patent dated July 31, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The improved flexible bottom oil feeder, as made, with the rod D, extended from the flexible bottom and into and through the discharging pipe C, substantially as specified.

No. 29,447.—EDMUND W. TARBELL, of Boston, Mass., assignor to himself and E. A. SIMONDS, of the same place.—*Improved Steering Apparatus*.—Patent dated July 31, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination and arrangement of the two reversed screws I I¹, and their lifting nuts H H¹, supported in guide slots or their equivalents, with leading chains connected with the tiller, and with mechanism for simultaneously rotating the two screws by means of a hand wheel, as described.

No. 29,448.—CHARLES H. WILLCOX, of New York, N. Y., assignor to JAMES WILLCOX, of Brooklyn, N. Y.—*Improvement in Sewing Machines*.—Patent dated July 31, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The method herein described of securing the proper adjustment of the needle in the socket of its stock or holder, by means of an inner spline or locking guide to the socket, in combination with a needle, grooved or slotted longitudinally at its shank, substantially in the manner and for the purposes set forth.

No. 29,449.—C. M. YOUNG, of Sinclairville, N. Y., assignor to himself and E. BROWN, of said Sinclairville.—*Improvement in Machines for Jointing Staves*.—Patent dated July 31, 1860.—The object of this invention is to obtain a machine by which staves may be jointed with a greater or less bilge, according to their width, or, in other words, have their edges cut with a greater or less degree of taper each way from their centre outward, according to the bilge required, the latter being determined by the width of the stave, the wider the stave the greater the taper, and vice versa.

Claim.—The arrangement of the slide F, curved rod H, rod I, and arms J J, substantially as shown, to admit of the operating and the working of the planers K on the guides L, at varying degrees of obliquity of the latter, for the purpose specified.

No. 29,450.—WALTER AIKEN, of Franklin, N. H.—*Improvement in Knitting Machines*.—Patent dated August 7, 1860.—This invention consists in providing sliding traversing sinkers to push or press the fabric knit off of the needles between which the sinkers are operated, and in supporting the wheel that presses or holds the work or fabric knit back on the needles by an arm bent or curved around to the under side of the wheel, so that the top of the pivot on which the wheel turns may pass freely under the needles.

The inventor says: I *claim* the sliding traversing sinkers, arranged in the manner described, for the purposes set forth.

I claim the sliding traversing sinkers, arranged in the manner described, in combination with stationary needles, as and for the purpose set forth.

I claim supporting the wheel that presses or holds the work or fabric back on the needles by an arm bent or curved around to the under side of the wheel, substantially as described.

No. 29,451.—D. D. ALLEN, of South Adams, Mass.—*Improvement in Tubes for Spinning Frames*.—Patent dated August 7, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* constructing the barrel of the two pieces of tinned plate iron, fitted together and united by soldering, substantially as described.

And, in combination with the barrel composed of two shells of tinned iron plate, I claim the copper bushings applied and soldered within the inner shell, substantially as described.

No. 29,452.—SAMUEL F. ALLEN, of Chicago, Ill.—*Improved Water Heater for Locomotive Engines*.—Patent dated August 7, 1860.—This invention consists in constructing and arranging the different parts named in the claim.

The inventor says: I *claim*, first, the employment of the heater, constructed in the manner represented, with steam chambers *a* and *c*, and intervening water chamber *b*, said chambers being connected substantially in the manner and for the purpose specified.

Second. In combination with the heater B, I claim the compound exhaust pipes D D, when the same are arranged and used substantially as and for the purpose specified.

Third. And, in combination therewith, I claim the float valve V, substantially as and for the purpose specified.

No. 29,453.—EDWARD BEHR, of New York, N. Y.—*Improvement in Carriage Brakes*.—Patent dated August 7, 1860.—To the upper surface of the axle A a lever E is attached, its fulcrum pin *c* passing through its centre; this lever E has a pin *d* projecting down from each A, and end of it, and these pins fit in the slots *b b* of the slide bars D D.

Claim.—The combination of the slotted sliding bars D and rotary lever E, with the axle spokes of the wheel B, as and for the purpose shown and described.

No. 29,454.—JOHN M. BROOKE, of the United States Navy.—*Improved Deep Sea Sounding Meter*.—Patent dated August 7, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the combination, in one frame, of two propeller-shaped wheels, or their equivalents, rotating in opposite directions, thus compensating the errors arising from the rotation of the whole apparatus about its axis, while descending through the water, and the mode of connecting the endless screws of the propeller-shaped wheels, or their equivalents, with the registering trains, by the aid of the weight used to sink the line, in opposition

to any retarding influence on the line above, and of disengaging the same, by the aid of a spring rod and arms, as set forth in the preceding description, when the weight used to sink the line is detached from it.

Also, the mode of clamping the driving wheels of the registering train, when the propellers are disengaged by curved or hooked arms attached to the arms G, as shown in the accompanying drawings.

No. 29,455.—CHARLES H. BROWN, of Fitchburgh, Mass.—*Improved Low Water Alarm Apparatus for Steam Boilers*.—Patent dated August 7, 1860.—The claim and engravings explain the nature of this improvement.

Claim.—The arrangement of the connected pipes A and B, the slotted rod E, or other fixed fulcrum, the lever H, and the whistle W, or its equivalent, whereby the expansion of the pipes not only causes the operating valve of the whistle, or equivalent, to move from its seat, but the seat to move simultaneously from the valve, substantially as and for the purpose specified.

No. 29,456.—GEORGE BLANCHARD, of New York, N. Y.—*Improvement in Lamps*.—Patent dated August 7, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the lamp A with the slide or tube B, when the same is provided with the handle C, so that, when taken hold of, the lamp drops down by its own weight, thus affording a lantern.

No. 29,457.—JOHN BLOCHER, of Williamsville, N. Y.—*Improvement in Water Wheels*.—Patent dated August 7, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of a number of ratchet toothed wheels, arranged upon one shaft, a chain of buckets hung together by knife-edge joints formed of curved flanges at top and bottom of the buckets, and self-adjusting bearings of a guide roller shaft, substantially as and for the purposes set forth.

No. 29,458.—S. BOURNE, JR., of New York, N. Y.—*Improvement in Trunks*.—Patent dated August 7, 1860.—This invention consists in producing a trunk the body of which, as well as the cover, is formed in such a manner that on the outside no seam is required.

Claim.—As a new article of manufacture, a seamless trunk, as described and set forth.

No. 29,459.—C. P. BUCKINGHAM, of Mount Vernon, Ohio.—*Improvement in Governors for Steam Engines*.—Patent dated August 7, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the method of attaching the arms to the spindle of the governor, at points beyond the axis, with respect to the balls, whereby the acting portions of the said arms lengthen as the balls rise, carrying up the vortex of the cone described at the same time with its base, and thus maintaining a nearly uniform length of axis, substantially as described.

Second. The method of attaching the balls to the arms and sustaining them by springs which can yield, as may be necessary, to the centrifugal force of the balls, whereby the arms of the governor lengthen at the lower end, and the rising of the base and shortening of the axis is diminished, substantially as described.

No. 29,460.—JOHN M. BUELL, of Zanesville, Ohio.—*Improved Churn*.—Patent dated August 7, 1860.—This invention consists in applying to the common dasher churn a combined bowl and tunnel-shaped device, by which the cream is prevented from spattering out, and any cream brought upon the handle, J being rubbed off, is returned again into the churn; and also, in combination with this device, a spiral spring, which equalizes the motion of the dasher and renders its operation more easy.

Claim.—The device A, constructed as described, in combination with the churn spring B, handle g, and head block C, the whole operating as described and for the purposes set forth.

No. 29,461.—RICHARD B. BURCHELL, of Brooklyn, N. Y.—*Improved Window Shade Fixture*.—Patent dated August 7, 1860.—This invention relates to an improvement in that portion of shade fixtures which is employed to retain in proper position and keep "taut" the roller cord.

Claim.—The rod A, provided with racks a, one or more, and smooth surfaces b, and fitted within the bracket B, which is provided with a pawl or pawls h, all being arranged to operate substantially as and for the purpose set forth.

No. 29,462.—NELSON BERR, of Batavia, N. Y.—*Improvement in Portable Mills*.—Patent dated August 7, 1860.—This invention consists in constructing the revolving and stationary

plates with circular chambers, in order to admit the grinding rings or surfaces; also in the employment and arrangement of other devices.

Claim.—The combination of plates C and D, spiral wings H H, adjustable grinding surfaces E and F, and receiver B, the whole being constructed substantially as and for the purpose specified.

No. 29,463.—DAVID B. CALDWELL, of Cincinnati, Ohio.—*Improvement in Straw Cutters.*—Patent dated August 7, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the combination and arrangement of the gearing J j M G, for operating the feed rollers, substantially as set forth.

Second. The specific arrangement of shafting I L and gearing J K, by which different speeds can be given to the working parts of the machine by a change of the point of application of power, as described.

No. 29,464.—GEORGE L. CARVER, of Brazil, South America.—*Improved Marine Propeller.*—Patent dated August 7, 1860.—This invention consists in the manner of constructing the piston *aa*, with the reversible lever or brace *b*, revolving on the rod K, and alternating floats, or wings *c c*, for propelling or reversing boats and avoiding the back action of the water.

Claim.—The combined use of the valve, piston-box and reversing apparatus, actuated by the rod *d*, the combined parts being constructed and operating in the manner and for the purposes set forth.

No. 29,465.—MATTHEW CHAPMAN, of Greenfield, Mass.—*Improvement in Handles for Cutlery.*—Patent dated August 7, 1860.—In this invention the bolsters are made separate from the other parts and attached in a peculiar way.

Claim.—The fitting of the bolsters C, in the flat tangs B, by means of the slots D, therein substantially, as shown and described.

No. 29,466.—AMOS COATES, of Marlborough, Ohio.—*Improvement in Chain Pumps.*—Patent dated August 7, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination, with the rubber band E, of the buckets, or water-lifters F, constructed with long wedge or scoop ends *h*, and their cross sections being of a boat or wedge-like form, as shown in Fig. 4, with pieces *d f*, hinges *g*, arms D, and projections *c c*; the whole constructed and operating conjointly, as shown and described.

No. 29,467.—JACOB COOVER, of Chambersburg, Penn.—*Improvement in Wiring Blind Rods.*—Patent dated August 7, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the combination of the eccentric I, and adjustable bar P, with the driving bar B, and slat groove J, as herein shown and described, so that the slat L may be so set and held that the wires will enter at an angle to the axis of the slat, all as set forth.

I also claim the employment of eccentric I, or its equivalent, to compress that portion of the slat which is immediately below the driving bar, so that the slat will not split when the wires are driven into it, substantially as herein shown and described.

I also claim the bevelling of the lower part of the plate F, as shown at *x*, so as to permit the near approach of the slats S to the conducting groove, as and for the purpose set forth.

I also claim the combination of the stop V, with the conducting groove Z, as and for the purpose herein shown and described.

I also claim the arrangement, as herein shown and described, of the spring L, conducting bar D, conducting groove Z, and driving bar B, as and for the purpose herein shown and described.

No. 29,468.—G. W. COTTINGHAM and JOHN S. MENEFEE, of Texana, Texas.—*Improved Ant Trap.*—Patent dated August 7, 1860.—This invention consists in the arrangement of a receptacle, with an inverted conical spout in its bottom; also in the combination of a receptacle and inverted conical spout in its bottom with an inwardly bent rim around the top of the receptacle. It further consists in the combination of a receptacle and conical spout in its bottom, with extension pipes.

Claim.—The combination with the cylindrical reservoir A, which may be protected by an inverted truncated cone B¹, if desired, of a conductor C or C¹, substantially in the manner and for the purpose set forth.

No. 29,469.—EDWARD DANIELS, of Northampton, Mass.—*Improved Case for Indelible Ink Bottles.*—Patent dated August 7, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The hollow conical case A, with the removable bottom B, for the purposes described.

No. 29,470.—JOB C. DAVIS, of San Francisco, Cal.—*Improvement in Quartz Mills*.—Patent dated August 7, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Arranging a series of grinders E, so as to form a spiral line or spiral lines around the centre shaft, constructed in the manner and for the purposes set forth.

No. 29,471.—F. DECAMPOLORO, of France.—*Improvement in the mode of producing Paper Pulp*.—Patent dated August 7, 1860.—The claim explains the nature of this invention.

The inventor says: I *claim* the employment of the cobs of Indian corn, either alone or with the husks, substantially as described, for the purpose of producing pulp for paper

No. 29,472.—THOMAS B. DEFOREST, of New York, N. Y.—*Improvement in Lanterns*.—Patent dated August 7, 1860.—This invention consists in making the base piece of the lantern separate and detached from the other parts of the apparatus, in order that it may be renewed when necessary, and in order that the detachment of parts of the apparatus for the renewal of the glass may be more readily effected.

The inventor says: I *claim* making the base or stand-piece C of the lantern separate and removable from the other parts of the apparatus, substantially as described, for the purposes set forth.

I also claim the reversible handle d, in combination with a base C, cut out to fit partly round the arm; the whole arranged to operate substantially as and for the purposes described.

No. 29,473.—CORNELIUS DONOVAN, of East Abington, Mass.—*Improvement in Rotary Engines*.—Patent dated August 7, 1860.—This invention consists in a certain mode of applying, in combination with the sliding pistons upon which the steam acts to produce rotary motion, the pistons upon which the steam acts to force out the main pistons from the wheel, to which they are attached, into contact with the stationary cylinder of the engine and hold them out in contact therewith; also in the use, in combination of springs with such pistons.

The inventor says: I *claim* combining the pistons I I¹, with the main pistons F F¹, by means of levers H H¹, applied within the piston wheel, substantially as described.

And, in combination with the pistons F F¹ I I¹, and levers H H¹, I claim the springs J J¹, applied and operating as specified.

No. 29,474.—CHARLES TENNANT DUNLOP, of Glasgow, Scotland.—*Improvement in the Manufacture of the Oxide of Manganese*.—Patent dated August 7, 1860.—The claim explains the nature of this invention.

Claim.—Boiling with carbonate of lime, and at a temperature of about 280° Fahrenheit's thermometer or undue pressure, the chloride of manganese commonly obtained as a waste product in the manufacture of chlorine, and subsequently treating the product thus obtained in the manner substantially as set forth.

No. 29,475.—H. C. EMERY, of Lincoln, Ohio.—*Improvement in Rotary Engines*.—Patent dated August 7, 1860.—This invention consists in arranging and constructing the several parts of this engine.

Claim.—The case A¹ A², cam wheel B, the shaft W, the metallic ring Y, secured in annular grooves in the sides of the case, the springs X X, the packing d and n, and the jointed valves a a, constructed and arranged in the manner and for the purpose specified.

No. 29,476.—JAMES R. ENDER, of Trenton, La.—*Improved Fountain Washstand*.—Patent dated August 7, 1860.—This invention consists in arranging within the cupboard or body of the washstand, and under the basin in the top of said stand, a reservoir of a suitable capacity, containing a suitable water bellows, from which proceeds a tube or pipe which leads to the basin, and is furnished with a suitable stop-cock.

Claim.—Combining with a washstand, as described, the water reservoir or bellows E, and pipe F, leading up to the basin B; the whole being arranged and operated in the manner and for the purposes set forth.

No. 29,477.—ORLANDO FOSTER, of Kenosha, Wis.—*Improved Machine for Upsetting Tire, &c.*—Patent dated August 7, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The jaw A, movable jaw B, toothed cams D D, dies F F, eccentric lever C, swaging block 1, punching block 2, and shears 3, as they are arranged in relation to each other, and operated as set forth.

No. 29,478.—WILLIAM FUZZARD, of Charlestown, Mass.—*Improvement in Machinery for Forming Hat Bodies*.—Patent dated August 7, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the employment or use of rotating conical rollers *d e*, in connection with pickers *E*, arranged over, and concentric with, a hat former or cone *B*, to operate substantially as and for the purpose set forth.

I further claim the arrangement of the picker cases *F*, connected together and placed relatively with pickers *E*, and rollers *d e*, so as to form a feed table as well as cases for the pickers, as described.

No. 29,479.—LEWIS P. GARNER, of Ashland Borough, Pa.—*Improved Apparatus for Separating Slate from Coal*.—Patent dated August 7, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The employment of the screen within the screen, movable, so that the inside screen may be moved or depressed, at the will of the operator, thus increasing or diminishing the width of the spaces or openings between the bars, by reason of the peculiar shape of the bars, so that larger or smaller pieces of slate and other impurities may be separated from the coal and other materials that may be passed over said screens.

No. 29,480.—HENRY GARRETT, of Richmond, Mo.—*Improved Spike for Hinges*.—Patent dated August 7, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* making the tail end of the spike in the form of a crotch, with the prongs thereof in the form described, that they will turn in the wood as shown; this I claim, not as a principle, but as a new article of manufacture.

No. 29,481.—W. H. GWYNNE, of New York, N. Y.—*Improvement in Apparatus for Compressing Gas*.—Patent dated August 7, 1860.—This invention consists in the arrangement of two drums, which are connected with each other by suitable pipes for introducing and discharging the gas, in combination with a cylinder provided with a piston, in such a manner that by filling the cylinder and a portion of the drums with water, and operating the piston in one direction or the other, the gas contained in one of the drums is forced out by the inflowing water, while at the same time the other drum fills with gas, and that by imparting to the piston a reciprocating motion, said drums alternately fill and discharge, and the gas that is forced out of the drums is compressed in a suitable vessel connected with the discharge pipes.

Claim.—The arrangement, for the purpose of compressing gas, of the drums *A A*¹, supply pipe *C*, and discharge pipe *D*, in combination with the cylinder *B*, constructed and operating substantially as described.

No. 29,482.—STUART GWYNN, of New York, N. Y.—*Improved Method of Generating Steam*.—Patent dated August 7, 1860.—The claim and engravings explain the nature of this invention.

Claim.—As new in the generation of steam or other vapors, reproducing it after performance of its duty by condensing it in the generator which served to produce it, and employing a regenerator or superheater for operation in concert with the boiler, in the manner described, whereby the latent and sensible heat of the steam is made available to the reproduction of steam, and the latter, though circulated out of and back through the boiler, kept at a proper working tension.

No. 29,483.—WILLIAM HALDERMAN, of Freeport, Ill.—*Improved Device for Bolting Flour*.—Patent dated August 7, 1860.—This improvement consists in the employment of screens having a vibrating motion, and used in connection with endless conveying aprons being placed within a suitable case, and arranged in such relation to each other, and to proper spouts, so that a compact and efficient device is obtained.

Claim.—The employment or use of the vibrating screens *E F*, in connection with the endless apron *H I*, and suitable spouts *J l m o a*¹, arranged relative with each other and within a case or box *A*, as and for the purpose set forth.

No. 29,484.—ORIGIN HALL and TIMOTHY MERRICK, of West Meriden, Conn.—*Improvement in Thread Dressing Machines*.—Patent dated August 7, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim* the arrangement of the threads to pass in tangential lines to the circumference of the brush cylinder *B*, substantially as shown and described, so that each thread, in its passage through the machine, will be simultaneously acted upon by the same brush at some part of each tangent, as and for the purpose set forth.

And we also claim so arranging the grooves *d d*, in the rollers *C C*¹ *C*² *C*³, or so applying the threads in such grooves, that the several places of contact between either thread and the brush cylinder are in different planes of revolution of the latter, substantially as and for the purpose set forth.

No. 29,485.—THOMAS HALL, of St. Louis, Mo.—*Improved Feeding Apparatus for Printing Presses*.—Patent dated August 7, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the tongued vibrating and reciprocating gripper *u*, in combination with the gridiron plate *d*.

Second. I claim the use of the binding bars *n n*, in combination with the plate *f*.

Third. I claim the manner of adjusting the plate *f*, described.

No. 29,486.—ABRAHAM G. HAMAKER, of Peoria, Ill.—*Improvement in Gas Burners*.—Patent dated August 7, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, constructing the heating chamber of the burner, substantially as described, or in an equivalent manner, so that the different jets shall act upon the side of the burner, and unite in a single flame above its apex.

Second. Arranging over the jet orifices a deflecting plate, constructed substantially as described, so as to deflect and give the required direction to the jet of flame.

Third. The combination of a chambered burner with a central pipe, so arranged that its orifice or orifices of discharge will be above the jet orifices of the burner.

No. 29,487.—DANIEL S. HEFFRON, of Utica, N. Y.—*Improved Refrigerator*.—Patent dated August 7, 1860.—This improvement consists in the peculiar manner in which the air cooled in the ice box is carried around the provision chamber, and not permitted to enter such chamber to deposit the moisture it carries mechanically from the ice in the chamber; also, in the construction and use of an air-drying and cooling chamber, for drying and cooling another current of air to ventilate said provision chamber; and also in the construction and use of a sloping top, for the provision chamber, to carry down to one side any moisture which may condense on such top.

Claim.—The construction and arrangement of the ice box *E*, the registers *F*¹ *F*² *F*³ *F*⁴, the openings *G*¹ *G*², the spaces *H*¹ *H*² *H*³, and the drying chamber *K*, substantially as and for the purpose specified.

No. 29,488.—ALEXANDER HILL, of Dubuque, Iowa.—*Improvement in Compositions for Tanning*.—Patent dated August 7, 1860.—This invention consists in the employment of a composition of soda, gum tragacanth, terra japonica, alum, common saltpetre, and prussiate of potash, mixed together in a certain proportion and dissolved in water, for the purpose of tanning hides and skins.

Claim.—The employment or use, for the purpose of tanning hides or skins, of a composition prepared by dissolving in water the above-named ingredients, mixed together in about the proportion set forth and described.

No. 29,489.—CARL HINRICHS, of New York, N. Y.—*Improvement in Obtaining Coloring Matter from Oak Bark*.—Patent dated August 7, 1860.—The inventor says: I extract the dying properties from the coarsely ground bark by the application of steam, in the proportion of half the weight above the weight of the atmospheric pressure—say about eight pounds; when the operation is finished, the liquid is placed in another vessel and mixed in proportion to the weight of the bark which I have used, with ten per cent. of the following acids: $\frac{2}{3}$ of the ten per cent., sulphuric acid, 66 per cent.; $\frac{1}{3}$ muriatic acid, 20 per cent.

Claim.—The process of concentrating dying extracts to such a high degree by boiling and treating them as described in the foregoing specification.

No. 29,490.—CHARLES B. HUTCHINSON, of Auburn, N. Y.—*Improved Mill for Grinding Grain and Apples*.—Patent dated August 7, 1860.—This invention consists of a peculiar combination of a cider mill, grain mill, and a corn sheller.

The inventor says: I *claim*, first, the above described combination of a cider and grain mill and corn sheller, substantially as specified, for the purposes set forth.

Second. I claim the peculiar construction and arrangement of the crushing teeth *M* and *Q*, operating substantially as set forth, for the purposes specified.

No. 29,491.—WILLIAM HYDE, of Emery, Ohio.—*Improvement in Beehives*.—Patent dated August 7, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination of the box *E* with the box *A*, when said box *E* is arranged as specified, for the purpose of increasing the capacity of the hives.

Second. I claim, in combination with my extension hive, the use of cloth or other suitable material combined with galvanic plates, when applied in the manner and for the purposes described and represented.

No. 29,492.—LEWIS S. INGRAHAM, of Grafton, Ohio.—*Improved Butter Worker*.—Patent dated August 7, 1860.—In operating this machine the butter is laid upon its bed at *m*; the roller *A* is rolled over it, backwards and forwards; the ribs *r r* pressing into the butter and working the milk out, make gutters in the butter, down which the fluid pressed from the butter descends to the gutters *y y*, thence passing through the slot *x x*, and into the metallic gutter *H*, which conveys it away. This process is repeated until the butter is clean.

Claim.—The bed, made of two parts *F* and *S*, conical roller *A*, unequally fluted on half or more of its periphery, button *C*, metallic gutter *H*, hinges *N* and *m*², turn table *m*, grooved gutters *y y*, and slots *x x*, the whole constructed and used as and for the purposes described.

No. 29,493.—ANTHONY ISKE, of Lancaster, Pa.—*Improved Cupboard and Sink*.—Patent dated August 7, 1860.—The object of this invention is to economize space in kitchens, so that two indispensable articles of furniture may occupy the space of one.

Claim.—The combination and arrangement of the sliding sink board *B*, and the hinged wings *A*, when attached to a cupboard or closet, substantially as and for the purpose specified.

No. 29,494.—BENJAMIN W. JEWETT, of Gilford N. H.—*Improvement in Artificial Legs*.—Patent dated August 7, 1860.—This improvement consists, first, of an improved knee spring to be used in all cases where the amputation is above, and, in certain cases, where the amputation is below the knee; secondly, in an improved knee joint, to be used only in cases of amputation below the knee.

The inventor says: I *claim*, first, the construction and operation of the guide *b*¹, connected by a suitable joint to the thigh piece *A*, the guide *b*¹ being free to move through the slotted bar *E*, and being enclosed by the spring *e*, as set forth.

Second. The flanges *q q*¹, and the lips *x x*¹, in combination with the bolt *M*, constructed and operating as set forth.

No. 29,495.—WILLIAM H. KIMBALL, of Augusta, Me.—*Improved Hand Cuff*.—Patent dated August 7, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the cuff, so formed as to open opposite the rule joint in equal parts.

Second. The ratchet 2, as applied to the cuff.

Third. The connection of the draw screw 3, to the ratchet 2, by a vibrating joint.

No. 29,496.—WILLIAM F. KUBLER, of New York, N. Y.—*Improved Shirt Stud*.—Patent dated August 7, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A stud with a screw shank and point, in combination with a spring clamp, substantially as described.

No. 29,497.—WILLIAM S. LAWYER, of Gratiot, Ohio.—*Improvement in Seeding Machines*.—Patent dated August 7, 1860.—This invention consists in distributing seed by means of a fluted roller, working under the rising and falling bottom of a flexible hopper, so that by rotating said fluted roller the seed is discharged, and at the same time the bottom of the hopper closes down on the top of the distributing roller, so as to prevent any discharge of seed when the roller is at rest.

Claim.—The combination of the suspended yielding hopper bottom *G* with the fluted roller; the same being arranged and operated substantially as described.

No. 29,498.—JOHN LEIGH, of Edgefield, S. C.—*Improved Bedstead*.—Patent dated August 7, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The employment of the rail caps, composed of arms *D D*¹, straps *E*, bar *a*^{*}, made in one piece, with pins *a c*, in combination with the rails *B C*, eyes *b d*, and posts *A*, as shown and described.

No. 29,499.—B. F. LEMMON, of New Albany, Ind.—*Improvement in Condensers for Steam Engines*.—Patent dated August 7, 1860.—This invention consists in constructing and arranging the different parts.

The inventor says: I *claim*, first, the arrangement of the jacket *C*, covering the steam pipe *D*, with the pipes *a* and *d*, the casing *B*, and the condensing chamber *A*, provided with the perforated head *e*, substantially as and for the purpose specified.

Second. The arrangement of the water trap *E*, and the valve *F*, with the condensing chamber *A*; the whole being combined and used substantially as and for the purpose specified.

No. 29,500.—N. C. LEWIS, of Boston, Mass.—*Improved Machine for Rolling File Blanks*.—Patent dated August 7, 1860.—This invention consists in the use of four eccentric rolls, the axis of one pair being placed at right angles to the axis of the other pair; the whole being arranged with respect to each other so as to act simultaneously upon the metal.

Claim.—The combination of four eccentric rolls, constructed and arranged with respect to each other, as described, and of appropriate form to roll file blanks, as set forth.

No. 29,501.—ADOLPHUS LIND, of San Francisco, Cal.—*Improvement in Water Wheels*.—Patent dated August 7, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Providing the buckets G of a water wheel with a series of slots K, in combination with dividing plates L L, and the slots and set screws m m, for the purpose of regulating the size of the buckets.

No. 29,502.—HERMAN LINDEMAN, of New York, N. Y.—*Improved Piano Forte*.—Patent dated August 7, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement and construction of a curved or arched structure, as a substitute for the long and cross blocks now in use, in the manner and for the purpose substantially as described.

No. 29,503.—ISAAC LINDSLEY, of Providence, R. I.—*Improvement in Making Gold Chains*.—Patent dated August 7, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Forming the arms of the links convexo-concave in the operation of cutting the said link from the sheet or strip of metal, substantially in the manner and to the end specified.

No. 29,504.—JAMES H. MAYDOLE, of Eaton, N. Y.—*Improvement in Harvesting Machines*.—Patent dated August 7, 1860.—This invention consists in the use of two adjustable wheels M and L, so combined with the frame of a harvester and in such relative relation to each other and the frame and finger bar, as that, by the use of the levers P and T, and the parts in connection with them, or their equivalents, either end of the finger bar may be elevated from the ground independent of the other, or the entire finger bar, as the circumstances may require.

Claim.—The combination and arrangement of mechanism, substantially as described, whereby either end of the finger bar may be elevated from the ground independent of the other, or the entire finger bar by an attendant, substantially as described and for the purpose set forth.

No. 29,505.—ALEXANDER McELROY and JOHN H. KIMBLE, of Fox Lake, Wis.—*Improvement in Seeding Machines*.—Patent dated August 7, 1860.—This invention consists in the construction and arrangement of the different parts of the machine.

The inventors say: We claim, first, the arrangement of the adjustable plate a, and vibrating lever F, with the cam wheel G, distributing bar H, and slides e e, substantially in the manner and for the purpose specified.

Second. The arrangement of the seed box B, and the seed bar H, as constructed with the converging box I, and the triangular dividing bars d and e; the same being used substantially as and for the purpose specified.

No. 29,506.—FERDINARD MEYROSE, of St. Louis, Mo.—*Improvement in Machinery for Moulding Candles*.—Patent dated August 7, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim, first, the combination of candle moulds k, and hollow pistons J, which latter have a reciprocating motion, and serve the double purpose of guiding the wick h, and of pushing the candles, when finished, out of the moulds, substantially as and for the purposes set forth.

Second. The combination of candle moulds k, open at the bottom, with two frames l m lⁿ m¹, and two pairs of cams p q p¹ q¹, or their equivalents, for the double purpose of clamping the wicks between the two frames while the candles are being cast, and of opening the frames wide enough when the candles are finished, and allowing them to be pushed down through the opening at the bottom of the moulds and between the said frame, substantially as and for the purposes set forth.

No. 29,507.—JAMES L. MIDDLEBROOKS, of Salem, Ga.—*Improvement in Cotton Cultivators*.—Patent dated August 7, 1860.—In the operation of this machine the cutters prepare the ground for the ploughs d d, which follow to turn and loosen the earth; after these come the revolving hoes, which thoroughly chop the weeds from between the rows of cotton; the ploughs f f, following in the rear, leave a furrow on each side for drainage.

Claim.—The revolving hoes *a a*, secured upon the shaft *b*, and operated as shown, in combination with cutters *c c*, and ploughs *d d* and *f f*; the whole being constructed and arranged substantially as and for the purpose set forth.

No. 29,508.—SAMUEL MILLS, of New York, N. Y.—*Improved Life Boat*.—Patent dated August 7, 1860.—This invention relates to the construction and arrangement of life boats that cannot be swamped, capsized, or rendered useless, or lost, and which carry stores of fresh water and provisions.

The inventor says: I *claim*, first, the arrangement of the several compartments to reversible life boats, the same being protected by the outside section in the manner as described and for the purposes set forth.

Second. The application to reversible life boats of screw seats, the same being constructed and arranged substantially as and for the purpose specified.

No. 29,509.—EVARISTE MIRE, of New Orleans, La.—*Improvement in Mills for Cutting and Grinding the Corn, Cob and Husk Together*.—Patent dated August 7, 1860.—The principle feature of this invention is the arrangement, acting upon the husks in such a manner as first to cut them into particles, and by the same action force them downwards so they can pass through the mill with the other particles and come out a uniformly mixed article.

Claim.—The combination of the knives *K* and *f*, when used in conjunction with the teeth *O* and *V*, arranged and operated as, or substantially as, and for the purpose, set forth.

No. 29,510.—RICHARD MONTGOMERY, of New York, N. Y.—*Improvement in Iron Cars*.—Patent dated August 7, 1860.—The nature of this improvement is explained by the claim and engravings.

Claim.—The combination of the curved, corrugated top pieces *B*, with the corrugated side or base pieces *A*, and coupling pieces *H* and *G*; the whole arranged in relation to each other as and for the purposes set forth.

No. 29,511.—HIRAM NASH, of Maysville, Ky.—*Improvement in Water Elevators*.—Patent dated August 7, 1860.—This invention consists in suspending the bucket by means of a flat metal strip from a flanged metal drum that has its bearings on the crank shaft, which drum is clutched with the shaft by a clutch block fixed in the crank shaft, giving to the crank shaft a movement in the direction with its axis, and at the same time by causing a wedge to act upon a pawl that allows the flanged drum to rotate freely on its shaft. A lever and brake block are employed and made to act upon the flanged drum so as to give a perfect control of the descent of the bucket.

Claim.—The loose drum *G*, its toothed flange and pawl *K*, and clutch plate *H*, with the crank shaft *E*, lever *F*, wedge *J*, and plate *I*, for giving to the shaft an end play, in combination with band *b*, and bucket *D*; when the whole is arranged, constructed, and operated substantially in the manner and for the purposes set forth.

No. 29,512.—EBENEZER W. NICHOLS, of Worcester, Mass.—*Improved Holder for Polishing Wheels*.—Patent dated August 7, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the arrangement of the bar *L*, screw *J*, roller *H*, and gauge *K*, in combination with shaft *D*, clamp *G*, rollers *J*, and the handles *E*² and *F*, when employed substantially as and for the purpose specified.

I also claim the clamping device for holding articles by their edges, consisting of the handle piece *P*, lever jaw *Q*, stationary jaw *O*, and hook *S*, when arranged and employed substantially as specified.

No. 29,513.—JOSEPH OLMSTEAD and WILLIAM A. WALKER, of Victoria, Ill.—*Improved Machine for Upsetting Tire*.—Patent dated August 7, 1860.—This invention consists in the employment of a horizontal, stationary, and movable bed plate, on each of which is a fixed jaw and a pointed dog or clamp, which latter are operated by a pointed lever and connecting rod, moving them up to the tire simultaneously, and causing each of them to clamp the tire with an equal pressure.

Claim.—The combination with the stationary and movable plates *C C*¹, and their blocks *a a*¹, and jointed dogs *D D*, with the lever and connecting rod *E E*¹, and the hand lever and toggle-jointed levers *J G G*¹, all arranged and operating conjointly in the manner and for the purposes set forth.

No. 29,514.—WILLIAM H. PAINE, of Sheboygan, Wis.—*Improved Surveyors' Measure*.—Patent dated August 7, 1860.—The claim and engravings explain the nature of this invention.

The inventor says : I *claim*, first, a continuous sheet metal measure for surveyors' purposes, substantially as set forth.

Second. The combination of the jointless metal strip, or tape, expansion indicating gauge, or scale and circular scale ; the whole constructed, arranged, and operating in the manner and for the purposes described.

No. 29,515.—ED. PARKER, BENJAMIN PARKER, and THOMAS S. PARKER, of Schenectady, N. Y.—*Improved Lubricator*.—Patent dated August 7, 1860.—The claim and engravings explain the nature of this invention.

The inventors say : We *claim* the combination of the oil cup, having a perforated bottom, with the perforated plug B, arranged substantially as set forth, and made to operate automatically in the manner and for the purposes mentioned.

We further claim, in combination with the oil cup A, when said cup A is constructed and arranged substantially as described, the friction wheel G, for transmitting motion from the shafting to the oil cup, as and for the purposes set forth.

No. 29,516.—JOHN PARSONS, of Cleveland, Ohio.—*Improvement in Bottom Plates for Drain Tiles*.—Patent dated August 7, 1860.—The claim and engravings explain the nature of this invention.

The inventor says : I *claim* the two ridges *a a*, on the bottom A, substantially as described and for the purposes set forth ; but—

I do not claim a bottom without the ridges as my invention, neither do I confine myself to the bottoms and ridges being made of any particular material.

No. 29,517.—JOHN S. PECKHAM and MERRITT PECKHAM, of Utica, N. Y.—*Improvement in Stoves*.—Patent dated August 7, 1860.—This invention consists in adding to coal stoves, and to wood stoves having a grate for the burning of wood therein, a flat iron heater formed of the guard plate or fire plate, and a holder, the making of the said guard or fire plate in two parts, and perforating the doors which enclose or cover such guard or fire plate, and attaching a swinging cover to the bottom, or under side of the grate or fire box, by means of which last attachment such fire box may be made air tight when desired.

Claim.—The guard plate B, the holder C, and the under grate cover F^2 , constructed and operating substantially as described, in combination ; the said guard plate B, holder C, perforated doors H, and under grate cover F^2 , constructed and operating substantially as described, in combination.

No. 29,518.—A. W. PORTER, of St. Johnsville, N. Y.—*Improvement in Machines for Digging Post Holes*.—Patent dated August 7, 1860.—The claim and engravings explain the nature of this invention.

The inventor says : I *claim* the slotted spades or shovels A, as secured by the shackle bar B, and operated by the toggle joint C, substantially as set forth and for the purpose specified.

No. 29,519.—CHARLES A. PRIEST, of Winslow, Me.—*Improved Shoe Peg Machine*.—Patent dated August 7, 1860.—The claim and engravings explain the nature of this invention.

The inventor says : I *claim* my improved feeding and holding apparatus, the same consisting of the two blades G H, their slotted carriers K K L L, and a common stationary or adjustable fulcrum shaft M, such carriers being operated by bell cranks, as specified.

I also claim the mode of applying each blade to its carriers, viz : by means of the slides, ears, springs, and adjusting screws, operating together and with the blade and carriers, substantially as described.

I also claim the application of the adjusting sliders and screws to the opposite ends and fulcrum of the knife, as specified.

No. 29,520.—G. K. PROCTOR, of Beverly, Mass.—*Combined Clock and Burglar's Alarm*.—Patent dated August 7, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The attaching of the lever E of the clock alarm to the lever F, which has springs G H connected to it, and also a rod and cord *d e*, by which said lever E is connected to the slide J, on the door frame I, which slide is arranged with the projection *k*, on the door J, as and for the purpose set forth.

No. 29,521.—DANIEL READ, of Hamilton, N. Y.—*Improved Grinding Mill*.—Patent dated August 7, 1860.—This invention consists in the employment of a rotating cutting cylinder, in connection with a reciprocating, toothed, concave and rotating feeder, arranged for joint operation.

The inventor says : I *claim* the rotating, cutting cylinder D, in connection with the vibrating, toothed concave G, as and for the purpose set forth.

I further claim the combination of the cutting cylinder D, concave G, and feeding or toothed cylinder F, arranged for joint operation, as and for the purpose set forth.

No. 29,522.—C. J. SCHOENEMANN, of New York, N. Y.—*Improvement in Piano Forte Keys*.—Patent dated August 7, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement, in front of the ordinary key board, of an additional series of keys equal in number to the keys of the ordinary key board, and so placed that their upper surfaces are all on the same level, and that each key of the additional series connects with one of the keys of the ordinary key board, as and for the purpose set forth.

No. 29,523.—AUGUST SEMMENDINGER, of New York, N. Y.—*Improved Photographic Camera*. Patent dated August 7, 1860.—This improvement consists in moving the extensional part of the camera on wheels, in attaching to the camera a movable frame, on which the board containing the original may be attached, and in providing the movable and fixed frames with stands hinged thereon.

The inventor says: I *claim*, first, the wheels *m m*, in combination with the extensional parts *C C*, for the purpose of sliding the same in the grooves *n n*, substantially as described.

Second. Attaching the sliding frame *D D*, and the board *E*, to the camera, substantially in the manner described.

Third. The foot *E¹*, and the stand *F F*, hinged to their respective frames, in the manner and for the purpose substantially as described.

No. 29,524.—C. SEWERKROP, of Louisville, Ky.—*Improvement in Cutting Boxes*.—Patent dated August 7, 1860.—This invention consists in so arranging the attachments of the knife to the balance wheel that the knife can be securely connected thereto; also in connecting the rods and levers, by which the feed motion is operated, to the shaft from which they derive their motion by means of a slotted crank, so that the feed motion may be easily adjusted.

Claim.—The slotted crank *J*, on the shaft *E*, in combination with the pitman *L*, rocking shaft *M*, and devices for imparting the feed motion *O Q R*, all arranged substantially as and for the purposes described.

No. 29,525.—GEORGE SHERMAN, of Memphis, Tenn.—*Improved Metallic Alloy for Journal Bearings and Boxes*.—Patent dated August 7, 1860.—The component parts of this metallic alloy are one and a half pound of tin, one and a half pound of the regulus of antimony, and fourteen pounds of lead.

Claim.—The alloy of the aforesaid metallic materials, made in the manner and proportions set forth.

No. 29,526.—LEWIS H. SHULAR, of Crawfordsville, Ind.—*Improved Car Couplings*.—Patent dated August 7, 1860.—This invention consists in the ordinary case or buffer piece of a vibratable spring catch bar, in combination with a guiding spring and connecting link bar and foot piece.

Claim.—The combination of the vibrating catch bar *c*, elevating spring *D*, presser bar *E*, or its equivalent, depressing and guide spring *G*, and connecting link *B*, the whole constructed and operating substantially as described for the purpose set forth.

No. 29,527.—NORMAN H. SLADE and JOHN N. SCRANTON, of Bennington, Vt.—*Improvement in Driving Bands for Spinning Frames*.—Patent dated August 7, 1860.—The corresponding band *e¹* runs around the guide pulley *g¹*, over *m¹*, under the loaded pulley *t*, over the guide pulley *n¹*, around the whirls *f* of the end spindles *a¹*, between the inner sides of the under whirls *f¹ f¹*, and outer sides of the guide pulleys *w w*, and back to the pulley *D*. These bands drive the whole of the spindles, each driving those on one side of the frame.

Claim.—The arrangement of the guide pulleys *g g¹*, adjustable guide pulleys *n n¹ m m¹ i j*, bands *e e¹*, pulley *D*, and loaded tightening pulleys *s s¹*, as and for the purpose shown and described.

No. 29,528.—ELIZABETH M. SMITH, of Burlington, N. J.—*Improved Reaping and Mowing Machine*.—Patent dated August 7, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Operating the devices for putting the cutters of reaping and mowing machines in and out of gear, by the agency of the driver's seat, substantially as set forth.

No. 29,529.—CASPER V. STATLER, of Wataga, Ill.—*Improved Machine for Upsetting Tire*.—Patent dated August 7, 1860.—This invention consists in the employment of two levers, jointed together like a pair of large pincers, and operated so as to open and close by screw

power applied to the longer arms of the levers; and it also consists in combining with the jaws of these levers four jointed toothed dogs and an adjustable bar, the dogs holding the tire firmly, and the adjustable bar confining the tire between the two pairs of dogs in its proper place.

Claim.—The dogs D D¹ and E E¹, with adjustable bar G and its springs *d d*, in combination with the jointed levers A A, operated by the screw and link C C¹, and arranged substantially in the manner and for the purposes set forth.

No. 29,530.—JAKOB STUBER, FREDERICK FRANK, and PETER D. DOBIE, of Utica, N. Y.—*Improvement in Stoves.*—Patent dated August 7, 1860.—This invention consists in a coal stove, so constructed as to consume all the gas generated from the ignited coal.

Claim.—The arrangement of the perforated plate with smaller hollow cone A attached, larger hollow cone B, and flues C C, in connection with the revolving damper, Fig. 4; the whole being constructed and operated in the manner and for the purposes set forth.

No. 29,531.—LORENZO P. TEED, of White Deer Mills, Pa.—*Improved Arrangement for Disposing of the Sparks from Locomotive Engines.*—Patent dated August 7, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The conducting pipe F, with its openings *m m* and hinged shield G, when the latter are connected to bar H for simultaneous movement, and when the whole is arranged on the top of a railway car, and combined with the conducting pipe D and chimney *a* of the locomotive, as and for the purpose set forth.

No. 29,532.—GABRIEL UTLEY, of Chapel Hill, N. C.—*Improved Machine for Trimming Books and Paper.*—Patent dated August 7, 1860.—This invention consists in three reciprocating knives and a three armed slotted lever, in combination with a follower, for the purpose of trimming paper.

The inventor says: I *claim*, first, the reciprocating knives A B C, and a three armed slotted lever J K, in combination with a follower M P, substantially as and for the purposes set forth.

Second. Operating the knives substantially as described.

No. 29,533.—DAVID F. S. WAYS, of Baltimore, Md.—*Improved Lightning Arrester for Telegraphs.*—Patent dated August 7, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Effecting the suspension and renewal of electrical communication between the main wires and the interior of a telegraph office, or building in which such office is placed, by the use of an electric current, independent of the main line, substantially as described

No. 29,534.—BAXTER D. WHITNEY, of Winchendon, Mass.—*Improved Lathe.*—Patent dated August 7, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* a finishing tool F, in combination with a forming cutter *o* and a sliding rest *m*, so arranged that the different portions of the finishing tool shall be brought to bear successively upon corresponding portions of the article being turned immediately adjacent to the sliding rest as set forth.

I also claim the spring bearing S, within the annular rest *m*, operating as described for the purpose specified.

No. 29,535.—JOHN M. WOOD, of Seneca, N. Y.—*Improved Willow Peeler.*—Patent dated August 7, 1860.—This invention consists in providing a circular revolving disk, with a superincumbent cylindrical roller with a graduating screw on its surface, and so arranged in reference to the disk that when they are both in motion twigs of willow or other twigs of the same nature will pass between them and be speedily stripped of their bark.

The inventor says: I *claim*, first, the circular friction disk, as described, and for the purposes set forth, with its suitable covering of leather or other material.

Second. The screw cylinder, with its cone-shaped plain end, its variable screw, and its groove.

Third. The combination of the disk and screw cylinder, with adjustable facilities, as described and set forth.

No. 29,536.—JOHN H. WYGANT, of Hackensack, N. J.—*Improvement in Stopping and Starting City Railroad Cars.*—Patent dated August 7, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the combination of the inclined planes, arranged on a car body having an end play, or on the truck frame, with the friction rollers G G, or their equivalents, arranged substantially as and for the purposes set forth.

I further claim, in combination with a car body hung in such a manner, on rollers, as to ride on inclined planes, the chain brake operating upon the car axles and attached to both ends of the car body, as and for the purposes set forth.

No. 29,537.—WALTER YOUNG, of Waterford, N. Y.—*Improvement in Car Wheels*.—Patent dated August 7, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A car or carriage wheel, having a wooden felloe, spokes, and hub, and two metallic tires D E, with one tire overlying the other, as specified and represented in the annexed drawings, and the outer tire removable without disarranging the inner one.

No. 29,538.—CHARLES R. ALSOP, of Middletown, Ct., assignor to JOSEPH W. ALSOP, of New York, N. Y.—*Improvement in Rammers for Revolving Fire Arms*.—Patent dated August 7, 1860.—This invention consists in combining the plunger of the rammer with its operating lever, and with a rammer frame that is detachable from the stock by means of a fixed fulcrum pin in the frame; a transverse pin is secured in the rammer, and two slots arranged in the lever.

Claim.—Combining the plunger C with the lever D, and the frame A by means of the two pins *f g*, and the two slots *d e*, substantially as specified.

No. 29,539.—CHARLES ALEXANDER, of Washington, D. C., assignor to himself and W. C. CHOATE, of said Washington.—*Improved Cork Drawer*.—Patent dated August 7, 1860.—In the engravings A represents a rod which is provided at one end with a handle B, the other end being made pointed. Near the pointed end of the rod is a mortise *x*, and through this mortise a bar D is put, and pivoted about its centre to the rod.

Claim.—The within-described cork drawer, as an article of manufacture, consisting of a pointed rod, a handle, and a reversible cross bar, operating substantially as specified.

No. 29,540.—LEVI W. BUXTON, of Nashua, N. H., assignor to himself and R. B. CRAM, of said Nashua.—*Improved Bed Bottom*.—Patent dated August 7, 1860.—This invention consists of a bed bottom composed of four rods, to each of which a series of small pulleys is attached for the bed cord to reeve through, each rod being connected to its respective bedstead rail.

Claim.—The rods *c*, with their pulleys *f*, in combination with the elastic loops or bands C, and cords *g h*, operating substantially as described.

No. 29,541.—THOMAS BROWN, JR., of South Danvers, Mass., assignor to himself and WILLIAM H. BROWN, of said South Danvers.—*Improvement in Machines for Cutting Glue*.—Patent dated August 7, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim the above-described glue-cutting machine, consisting of the glue box or receiver A, the reciprocating separator or wire C, and an elevator D, arranged and combined together, and with mechanism for operating such separator and raising such elevator, substantially in the manner as described.

And, in combination therewith, I not only claim the bars *v w*, arranged with respect to the box A, and the separator C, for the purpose hereinbefore set forth, but I claim the mechanism or levers L M, for lifting the pawls *t u*, out of action with the racks, for the purpose specified.

No. 29,542.—O. F. BURTON, of New York, N. Y., assignor to himself and M. H. HOVEY, of said New York.—*Improved Fire Escape*.—Patent dated August 7, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim, first, combining the ladders A A¹ with each other, and with the trucks C C¹, substantially in the manner herein described, so that, by pulling the trucks close up together, the ladders are elevated, and by pushing the trucks apart the ladders are lowered.

Second. The arrangement of the rings B B¹, in combination with the hinged ladders A A¹, constructed and operating substantially as and for the purpose set forth.

Third. The combination of the circular platforms *c c*¹ of the trucks with the rings B B¹, substantially as and for the purpose specified.

No. 29,543.—ABRAHAM BAKER, of Shenandoah County, Va., assignor to himself, G. A. BROWN, and JOHN PIRKY, of said Shenandoah County.—*Improved Instrument for Paring Horses' Hoofs*.—Patent dated August 7, 1860.—This improved instrument is somewhat in the shape of a pair of nippers, or cutting clams, and applied to the animal's hoof differently from the manner in which the "buttress" is applied: it is applied to the hoof first, and the buttress used to smooth it off afterwards.

Claim.—The construction of the beak-shaped cutting instrument arranged with the guard,

adjusting set screw, as represented in figures 1, 2, 3, 4, substantially as herein set forth and described.

No. 29,544.—JOHN M. COOPER, of Chambersburg, and WILLIAM L. HALLER, of Carlisle, Pa.—*Improvement in Sealing Fruit Cans*.—Patent dated August 7, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the ring, the gasket, the cap or plate, and the vertical presser when arranged and applied upon the outside of the neck of a fruit jar or can, for sealing it, as herein set forth and explained.

No. 29,545.—WILLIAM GLUYAS, of San Francisco, Cal., assignor to himself and WILLIAM K. O'NEILL, of said San Francisco.—*Improved Amalgamator*.—Patent dated August 7, 1860. The claim and engravings explain the nature of this invention.

Claim.—The relative arrangement of alkali trough No 1, water trough No. 3, quicksilver troughs No. 2 and No. 4, and revolving amalgamator *d*, upon a furnace (containing three fire flues A A¹ B,) the four troughs and the amalgamator relatively communicating with each other by means of nozzles *a a a*, and pipes *k l*, so as to operate in conjunction with each other, as and for the purposes set forth.

No. 29,546.—T. C. HENDRY, of Conyers, Ga., assignor to himself, J. DILLWORTH, S. H. DEAN, T. J. HUTSON, E. H. PATTERSON, and A. J. HENDRY, of said Conyers.—*Improvement in Wheels for Vehicles*.—Patent dated August 7, 1860.—This invention consists in constructing a hub of metal, and of two parts, the interior of the hub being provided with screws and nuts, and the inner ends of the hubs bearing on the latter; all being arranged whereby the desired end is obtained.

Claim.—The hub A, constructed of two parts *a z*, the former having radial recesses to receive the inner ends of the spokes, in combination with the screws *h*, fitted in the annular recess *g* of the part *a*, provided with nuts *i*, so arranged as to form the bearings of the inner ends of the spokes, as and for the purpose herein set forth.

No. 29,547.—GEORGE F. HEBARD, GEORGE J. HILL, and S. D. ROCKWELL, of Buffalo, N. Y., assignors to SANFORD, WARREN & HAROUN, and GEORGE J. HILL, of said Buffalo.—*Improved Printing Press*.—Patent dated August 7, 1860.—This invention consists, first, in the construction, application, and use of an intermittent feed, so that cards, circulars, railroad tickets, and the like, can be printed on long sheets, or continued rolls of paper. Second In so arranging and combining the mechanism that each card or ticket may be printed and separated, or cut from the continuous roll of paper by a simultaneous operation of the machine.

The inventors say: We *claim* an intermittent feed, constructed, arranged, and operating for the purposes and substantially as described. We also claim, in combination therewith, the cutters R S, for the purposes and substantially as set forth.

No. 29,548.—GEORGE HANCOCK, of Providence, R. I., assignor to himself and JAMES M. RUTHERFORD, of said Providence.—*Improvement in Hose Coupling*.—Patent dated August 7, 1860.—The several catches are withdrawn in uncoupling, by means of the metallic sleeve G, which surrounds the opposite ends *n n n* of the latches or levers *h h h*, and turns loosely upon the neck *c* of the socket.

The inventor says: I *claim* the combination of the lever catches *h h h* with the elastic band I, or its equivalent, substantially as described, for the purpose specified.

I also claim the sleeve G, in combination therewith, constructed and operating as described, for the purpose specified.

No. 29,549.—MICHAEL OFFLEY, of Baltimore, Md., assignor to himself and WILLIAM COLTON, of said Baltimore.—*Improved Self-locking Device for Omnibus Registers*.—Patent dated August 7, 1860.—As the pin *m*¹ continues its motion, it slips past the end of the arm *n*³, and the ratchet pinion N being held fast by the pawl *n*², the index N¹ remains at the point 25, no matter how often the register may be operated after the pin *m*¹ has once passed the arm *n*³.

Claim.—The combination of the pin *m*¹ with the arm *n*³, when arranged for joint operation, substantially as herein described, for the purpose set forth.

No. 29,550.—JOHN PALMER, of Fort Scott, Kansas, assignor to himself and JAMES F. DRAPER, of Chicago, Ill.—*Improvement in the Manufacture of Vinegar*.—Patent dated August 7, 1860.—The claim and engravings explain the nature of this improvement.

Claim.—The discovery of a material for filling vinegar apparatus—"The Corn Cob."

No. 29,551.—HARVEY RICE, of Concord, N. H., assignor to JAMES H. DEMING and T. H.

JENKINS, of New York, N. Y.—*Improvement in Journal Boxes for Railroad Cars*.—Patent dated August 7, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Combining with the end bearings of the journal and box, oil lifting projections on the journal, and the channel way for receiving the oil, and leading to, and discharging it at, or near, the centre of the end face of the journal, substantially as and for the purpose specified.

No. 29,552.—JOHN B. ROWELL, of Lynn, Mass., assignor to JONATHAN BUFFUM, of said Lynn.—*Improved Composition for Covering Black Boards*.—Patent dated August 7, 1860.—The composition is composed of alcohol, shellac, linseed or other oil, lampblack or other coloring matter, flour of emory, and black oxyde of magnesia or sulphate of zinc, or other equivalent oil dryer.

Claim.—The combination of the herein before-mentioned ingredients, for the purpose set forth, substantially in the proportions described.

No. 29,553.—VOLNEY STOCKTON, of Williamsburgh, Ohio, assignor to himself and MITCHELL & RAMMELSBERG, of Cincinnati, Ohio.—*Improved Metallic Chair Bottom*.—Patent dated August 7, 1860.—The claim and engravings explain the nature of this invention.

Claim.—As a new article of manufacture, a chair bottom of corrugated sheet metal, as herein shown and described.

No. 29,554.—CHARLES WELLS and HENRY BARTH, of Cincinnati, Ohio, assignors to the CINCINNATI TYPE FOUNDRY, of said Cincinnati.—*Improvement in Printing Presses*.—Patent dated August 7, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim*, first, in printing presses having a vibrating platen or a vibrating bed, seizing the sheet of paper while upon the platen by nippers T S.

Second. We claim the fly R for properly disposing of the sheet of paper after it is printed, in combination with a vibrating platen or a vibrating bed and nippers T S, arranged and operating substantially as described.

Third. We claim carrying the fly R and nippers T S by the same frame X, that operates the ink rolls in printing presses, which employ a vibrating platen or vibrating bed.

Fourth. We claim the stationary nipper S, the nipper T, and the spring U, constructed, arranged, and operating as described, in combination with the hook Y, or its equivalent, upon the vibrating platen or bed C, for the purpose described.

Fifth. We claim the bar Q, vibrated by frame X, but pivotted eccentrically thereto, having rack p giving motion to pinion P, substantially as and for the purpose described.

No. 29,555.—JOHN P. ALLEN, of Dover, Ga.—*Improvement in Seed Planters*.—Patent dated August 14, 1860.—The operation of this invention is as follows: As the implement is drawn along, the legs of the animal communicate a vibrating motion to the bar K, and the latter, through the medium of the rod J and arm I, give an oscillating movement to the shaft H and arms i i, the latter causing the seed in the hopper G to pass out through the space h in a uniform manner, the arms i preventing the choking or clogging of the space h. The seed passes down through the box E and opening h, drops into the furrow, and is covered by the covering share N or N¹, the latter being preferable in rough ground, as it is more likely to pass over obstacles, the bar M being allowed to rise or remain self-adjusting.

Claim.—The arrangement of the two halves of the hopper g g, adjustable bars d d, oscillating shaft H, arm I, rod j, bar K, and straps k k, as and for the purpose shown and described.

No. 29,556.—WILLIAM BAILEY, of London Grove, Pa.—*Improved Machine for Bending Tire*.—Patent dated August 14, 1860.—This invention consists in bending the tire upon the wheel, the circumference of which is continuous and unbroken, of a bridle for securing the tire to the wheel, and an adjustable frame carrying the pressure roller.

Claim.—The roller F, when adjusted vertically through the medium of the frame E and double inclined plane G, and the bridle D, with its hooked legs d d, and screw c, when they are arranged in respect to, and in combination with, the continuous wheel C, substantially as described and for the purpose specified.

No. 29,557.—JOHN C. BAKER, of Mechanicsburgh, Ohio.—*Improvement in Fruit Jars*.—Patent dated August 14, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The peculiar conical form of the cap C, with a depression in the apex for the pivot e, and a groove around the base for the gasket a, when employed in combination with the clamp D, and inclines B B¹, as and for the purpose set forth.

No. 29,558.—LEVI W. BAKER, of Marlboro', Mass.—*Improved Bread Slicer*.—Patent dated August 14, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: My improvement and what I *claim* consists not only in constructing the knife with the stud pins *b*, made to project from its opposite sides, but in constructing the standard or carrier B, of two vertical plates *d d*, made with two curved slots *c c*, and an opening *e* leading out of each, in the manner explained and represented.

No. 29,559.—J. G. BARKER, of Watertown, Mass.—*Improved Cheese Cutter*.—Patent dated August 14, 1860.—This invention consists in supporting the knife on both sides, (one side being supported in a groove in the frame, and the other side in a groove in a pin which passes down through the centre of the cheese,) so as to enable the operator to use a very thin knife, which is less liable to break the cheese.

Claim.—The above described cheese cutter, having its knife K guided by the grooved rod M, and operating in the manner substantially as described.

No. 29,560.—PATRICK M. BELTON, of Brooklyn, N. Y.—*Improvement in Compounds used as Decolorizers*.—Patent dated August 14, 1860.—The claim explains the nature of this invention.

Claim.—The composition, substantially as specified, by combining chalk, or its equivalent, with peat, so as to form, after carbonization, a mass which may be used as a substitute for animal charcoal in sugar refining, essentially as set forth, and for other analogous purposes or uses.

No. 29,561.—LYMAN R. BLAKE, of Abington, Mass.—*Improvement in the Manufacture of Boots and Shoes*.—Patent dated August 14, 1860.—The claim and engravings explain the nature this invention.

Claim.—Uniting the bottoms and vamps of boots or shoes with stitches, made without passing the end and length of the unused thread through the parts united, by interlocking one loop of the thread with another, and extending through the said parts substantially as shown and described.

No. 29,562.—LYMAN R. BLAKE, of Abington, Mass.—*Improvement in Boots and Shoes*.—Patent dated August 14, 1860.—The claim and engravings explain the nature of this invention.

Claim.—As a new article of manufacture, a boot or shoe in which the bottoms and uppers are united with stitches, made without passing the length and end of the unused thread through the parts united, by interlocking one loop of the thread with another, and extending through the said parts.

No. 29,563.—J. N. BODINE, of Bridgeton, N. J.—*Improvement in Bottles*.—Patent dated August 14, 1860.—This invention consists in forming on the interior of the neck of the bottle, and on opposite sides, vertical grooves, in connection with horizontal grooves extending laterally on either side from the bottom of the vertical grooves, for the purpose of receiving a small independent block, or wedge of wood, or other material, which, after the bottle is corked, is driven into the vertical groove and slid around into the horizontal.

The inventor says: I *claim*, first, a bottle constructed with vertical and short horizontal grooves on the interior of the neck, substantially as described for the purpose set forth.

Second. The method of fastening the cork in the bottle, by means of vertical and horizontal grooves, in combination with an independent plug or block.

No. 29,564.—JOHN P. BOND, of Greenwood, S. C.—*Improvement in Ploughs*.—Patent dated August 14, 1860.—The object of this invention is to construct the ordinary single shovel plough in such a manner, that it will not need the usual diagonal brace, which greatly obstructs the forward movement of the plough through the ground on account of its gathering weeds, grass, &c., and it will be firmly and rigidly braced and secured against backward pressure.

Claim.—The arrangement of the curved brace G, beam A, with its clevises C C, stock E, cross bar D, and stilts B B, as and for the purpose shown and described.

No. 29,565.—SAMUEL G. BRETT, of Newport, N. H.—*Improved Machine for Pointing Shoe Pegs*.—Patent dated August 14, 1860.—The inventor says: Between the two driving rollers F F¹, and the driving rollers opposite them, is another roller X, which I make with angular or screw-like projections around the circumference. The office of this roller is to hold the block up to the pointing tool and to aid in conducting the block through the machine.

The inventor says: I *claim*, first, the elastic pressure rollers G G, the fluted rollers F F, or any equivalent substitute for the latter, and the angular or screw-like roller X, in combination with the tool stock H, arranged and operating as set forth.

Second. The improved tool stock H, with two or more pointing tools *a a*, running in the same groove, arranged as above set forth.

No. 29,566.—B. W. BRUEL, of Beloit, Wis.—*Improved Mop Holder*.—Patent dated August 14, 1860.—This invention consists in the use of two swivel clamping jaws, arranged on the ends of a bifurcated handle, furnished with the usual clasp or securing band.

Claim.—The slotted hole and pin by which the jaws $B^1 B^2$ are rendered self-adjusting, in combination with the bifurcated handle A and retaining clasp; the whole arranged and operating as described, for the purpose set forth.

No. 29,567.—LYMAN D. BURCH, of Sherburne, N. Y.—*Improvement in Ploughs*.—Patent dated August 14, 1860.—H represents a clevis of ordinary construction; *i* a bolt; *j* a slot extending the entire length of the cross head F, connected at each end only; K represents notches into which the bolt *i* may be dropped to increase or diminish the side draft. When the mould board A is shifted to the opposite side of beam B, the clevis H can be instantly changed to the opposite side by the attendant; this is accomplished by taking hold of the cord L.

Claim.—The combination and arrangement of arms D, rods E, slotted cross head F, clevis H, cord L, or its equivalent, substantially as set forth, for the purpose shown and described.

No. 29,568.—EDWARD G. BURGER, of Ypsilanti, Mich.—*Improved Foot Scraper*.—Patent dated August 14, 1860.—The claim and engravings explain the nature of this improvement.

Claim.—The arrangement of the inclined plate D, provided with plane and convex surfaces *b c*, and the uprights B B, having curved flanches, the above parts being used with or without the brushes C, as and for the purpose set forth.

No. 29,569.—SAMUEL CANTERBERRY, of Holmes County, Miss.—*Improvement in Ploughs*.—Patent dated August 14, 1860.—The helve *a* is so constructed, that, being united with the bar *b*, it forms a perfect shape for a turning plough, and, being detached from the bar, forms a shovel stock, the upper end of the helve being confined to the wooden beam *z* by two bolts *c* and *d*. The rod *e* serves for the triple purpose of supporting the beam and the helve, and extends behind the helve to which the lower ends of the handle *f* are made fast by a small bolt. The bar *b* is so constructed that it may be easily attached to the helve by one of the bolts, which screws the mould board on, and replaced by a new one.

Claim.—The arrangement of the beam Z, helve *a*, rod *e*, bolt *c* and *d*, hands *f*, bar *b*, piece *h*, and mould board *g*; the whole being constructed and combined in the manner and for the purposes set forth.

No. 29,570.—DANIEL S. CHASE, of Augusta, Ga.—*Improved Anti-friction Rollers for Propeller Shafts*.—Patent dated August 14, 1860.—This invention consists in the use of balls upon axles or arms attached to a ring fitting the shaft loosely so as to move around it, the balls running in grooves in the disk or permanent collar of the shaft.

Claim.—The combined use of the two sets of anti-fiction rollers, constructed substantially as described, one set on each side of the disk or collar of the shaft.

No. 29,571.—WILLIAM H. CHURCHMAN, of Janesville, Wis.—*Improvement in Furnaces for Heating Buildings*.—Patent dated August 14, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination and arrangement of the fire space with or without the grate *s*, central flue *d*, smoke damper T, return flues *b b*, covering plates *v v v*, openings in plates *x x*, and exit opening *a*, with or without the T-pipe for returning the smoke to the chimney, substantially as described, whereby the heat is economized and diffused over the surfaces of the rarefiers C *c* C¹.

Second. The arrangement of the hot air chambers A, cold air chambers B, and connecting flues A¹ B¹, in the walls of the furnace, with or without the stop dampers M N O O¹, substantially as described, whereby all or any number of the rarefiers C *c* C¹, may be connected at pleasure.

Third. The combination and arrangement of the evaporating pans P B, flues R R, and registered openings 2 2, substantially as set forth, whereby any required degree of heat may be imparted to the water in the pans, and all of the warmed air made to pass directly over the surface of the same in its passage from the furnace.

Fourth. The combination and arrangement of the rarefiers C *c* C¹, hot air chambers A, cold air chambers B, connecting flues A¹ B¹, stop dampers M N O O¹, ventiducts D F E G, registers H I J K, and dampers L, above the registers, substantially as described, whereby the warming and ventilating currents may be perfectly controlled, as set forth.

No. 29,572.—P. S. CLINGER, of Conestoga Centre, Pa.—*Improved Machine for Cutting*

Fodder.—Patent dated August 14, 1860.—In the engravings, Fig. 1 shows the convertible bar K M, enlarged with its bevelled grooved side K up, and one of the vice-jawed knife holders I, with its knife H in the groove L. Fig. 2, is a view of the machine ready for cutting and crushing corn stalks into fodder, supported on its frame F Y, the ends A and front B being closed up. The sliding table D is drawn out to show the knives and cutter bar, as also the binding rod with its screw end and burr *r r* in the cap.

Claim.—The combination of the bar K L, sliding chairs I, with their slotted semi-circular knives H, square-ended and slit screws C C², sliding table D, in the cap *c*, with its binding rod and screw *r r*, when combined as set forth for the purpose specified.

No. 29,573.—RICHMOND CRANSTON and HENRY BATES, of New London, Conn.—*Improvement in Projectiles for Fire-Arms.*—Patent dated August 14, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The employment of the washer *e*, in combination with the tube C, or its equivalent, and chamber *d*, so that the pitch, while in a plastic state, may be compressed around the fuse rope and the surplus pitch be allowed to escape, substantially as and for the purpose shown and described.

No. 29,574.—JOHN S. DAVIS, of Tiffin, Ohio.—*Improved Washing Machine.*—Patent dated August 14, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement of the grooves *b* in the sides of the tub A, and furnished with steps *c*, in combination with the pawl or pawls *d* and ratchet teeth *e*, substantially as described, for the purpose of adjusting the washboard to the height of the operator.

Second. The arrangement of the adjustable washboard B with a roller surface *e*¹, in combination with the reciprocating hinged rubber D, being guided in its motions by grooves in the side flanges *f* of the washboard, and operating in the manner set forth.

Third. The combination, with the washboard B and reciprocating rubber D, of a hook F, constructed and operating substantially as and for the purpose specified.

No. 29,575.—JOHN DEVLIN, of Philadelphia, Penn.—*Improved Lever Escapement for Watches.*—Patent dated August 14, 1860.—This invention consists in the substitution, for the banking pins commonly applied to lever escapements to control the movements of the lever, of banking springs, peculiarly constructed and applied.

Claim.—The application to the lever of the banking springs *f f*¹, constructed and arranged to operate in the peculiar manner described.

No. 29,576.—HENRY D. DUNBAR, of Memphis, Tenn.—*Improvement in Pistons for Steam Engines.*—Patent dated August 14, 1860.—The claim and engravings explain the nature of this invention.

Claim.—In combination with the solid or uncut ring A, the segmental or cut rings *e i*, the latter fitting into the angle of the former, and both breaking joint with each other, said rings *e i* being held out by the action of the steam in the cylinder, mainly to pack the piston, as represented.

No. 29,577.—JACOB EDSON, of Boston, Mass.—*Improved Street Sweeping Machine.*—Patent dated August 14, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, forming the rim of the driving wheel with a series of sectional projections, teeth, or cogs, that are susceptible of being removed and replaced, when worn, at pleasure, substantially as described.

Second. Arranging the broom shaft *b b* diagonally with and across the line of the driving wheel *w w* and supporting wheel *a*¹ *a*¹, as described and represented in the drawings, so as to easily balance the apparatus, however heavy the brooms and their shafts may be, with the use of but two wheels, permit the greatest possible width of broom being obtained, and enable the brooms to sweep close up to the edge stone, as set forth.

Third. Attaching the brooms directly to their shaft by means of the volute springs *c c*, so that they will bear with an elastic, yielding pressure upon and adapt themselves to the inequalities of the surface to be swept.

Fourth. The arrangement of the dish-shaped driving wheel and gear attached to the same, in the manner and for the purpose described.

Fifth. The arrangement of the swinging bar *k*, playing in the vertical standard *l* and forming a bearing for the broom shaft, as described.

Sixth. The use of the elastic band and strap *v*, operating as described, with the swinging bar, for the purpose set forth.

Seventh. Hanging the supporting wheel *a*¹ *a*¹ in the hinged frame work, as described, and for the purpose specified.

No. 29,578.—JAMES S. FOWLER, of Peoria, Ill.—*Improvement in Corn Planters*.—Patent dated August 14, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A seeding cylinder, arranged with its axis parallel to the line of motion of the machine, and having an alternate rocking motion in opposite directions, in order to scatter the seed laterally, in combination with a sled-runner drill plough, constructed and arranged substantially as described, for the purpose as set forth.

No. 29,579.—ROBERT W. GARDNER, of Quincy, Ill.—*Improvement in Governors for Steam Engines*.—Patent dated August 14, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Supporting the spindle of a governor on the head of a valve stem, but unconnected therewith, in combination with an adjustable weighted lever, tending to keep the several parts in close contact, and partly balancing the weight of the moving parts of the governor, substantially in the manner and for the purposes described.

No. 29,580.—R. M. GARRETTSON, of Rhinebeck, New York.—*Improved Camp Stool*.—Patent dated August 14, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Pivoting the arms B B B B and the legs E E E E to the slotted block A, and connecting these arms and these legs together by the peculiar joint described, so that the ends of said arms will act upon the ends of said legs in the block A in opening or closing the arms.

No. 29,581.—WILLIAM L. GEBBY, of New Richland, Ohio.—*Improvement in Seed Planters*.—Patent dated August 14, 1860.—This invention consists in the combination and relative arrangement of a plough share, harrow coverers, seed box, semi-circular valve, curved bar, connecting rod, spring, and levers.

Claim.—The combination and relative arrangement of plough share R, harrow U U S, coverers T T, seed box B, semi-circular valve I, curved bar L, and connecting rod C, spring H, and levers D H, substantially as and for the purposes set forth.

No. 29,582.—W. Y. GILL, of Henderson, Ky.—*Improvement in Air Pumps for Exhausting and Sealing Cans*.—Patent dated August 14, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, constructing and combining the plunger and air pump substantially as described, so that one plunger may be used for the double purpose of exhausting the air and driving the stopper firmly into the mouth of the can or jar, as set forth.

Second. Suspending the lower end of the main cylinder a suitable distance above the mouth of the can or jar by means of an enlarged cylinder cup attached to said end of the main cylinder, substantially as and for the purposes set forth.

No. 29,583.—SCHUYLER GOLDSMITH, of Wataga, Ill.—*Improvement in Cultivators*.—Patent dated August 14, 1860.—The object of this invention is to obtain a cultivator that will admit of being adjusted or raised and lowered bodily, while the operator is seated on the implement, and also admit of having its front part raised or lowered as circumstances may require.

Claim.—The combination and arrangement of the seat G, draft pole I, racks J K, and axle E, applied to the frame A, substantially as and for the purposes set forth.

No. 29,584.—BARDWELL A. GOODELL, of Millbury, Mass.—*Improved Rotary Engine*.—Patent dated August 14, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement, in combination with the hollow piston wheel E H, and the pistons F F, of the cam *b c d*, attached to the journal box I, which receives the inner end of the shaft, and enclosed within the piston wheel, substantially as described.

Second. The arrangement of the valves *n u u¹*, and their connections *w v v¹*, in combination with the single induction passage *q*, and its branches *r r¹*, and the two exhaust pipes or passages *t t*, substantially as and for the purpose specified.

No. 29,585.—CHARLES FRANZ GRABO, of Boston, Mass.—*Improved Copying Press*.—Patent dated August 14, 1860.—This invention consists in the combination of levers acting upon the top and bottom platen of the press, so as to operate both platens simultaneously; and secondly, in the manner of attaching the upright bolt to the top platen to be easily detached for the purpose of using the same as a seal press.

The inventor says: I *claim*, first, the combination of the rod G with the levers N and M, acting simultaneously upon the top and bottom platen of a press, in the manner and for the purpose substantially as described.

Second. I claim the manner of attaching the upright bolt E to the top platen, as described, and for the purpose substantially as specified.

No. 29,586.—GOTTLIEB GRAESSLE, of Hamilton, Ohio.—*Improvement in Drain Tile Machines*.—Patent dated August 14, 1860.—A is the frame of the machine, B is the tempering tub provided with the vertical shaft *c*, having attached the tempering blades D and forcing screw blade E, these, by a rotation in the direction of the arrow, being adapted to temper and force the clay through the apertures of the gratings F F into the tubes or passages G G.

The inventor says: I *claim*, first, the oil-boiled wooden moulds *g g*¹, constructed and applied in the manner and for the purpose set forth.

Second. The combination and arrangement of the tempering tub B C D E, grated sides F H, sliding frame I I¹, valves *b*, and moulding tubes G, constructed and operating in the manner and for the purposes set forth.

No. 29,587.—JOHN C. GOAR, of Monterey, Cal.—*Improved Belt Shipper*.—Patent dated August 14, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the pivotted locks or stops E E¹, and their spring G, upon the face of the belt shipper or slide B, in the manner shown and described, so that pressure upon either of the cords H H¹, will first unlock the corresponding stop and then move the slide, all as set forth.

No. 29,588.—WILLIAM H. GREENWOOD, of Galva, Ill.—*Improved Lock*.—Patent dated August 14, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The general form and arrangement of the plungers P of the key, as described, so that all the changes can be made in the key, thereby making it a "mental" lock or not, as wished; together with the general form and arrangement of the bolts A and B, the rack and pinions D and C, with the frame and lever E and F, in the manner described, so that the lock will accommodate itself to the key.

No. 29,589.—ASA GREENWOOD, of Toulon, Ill.—*Improved Tenoning Frame*.—Patent dated August 14, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, the combination and arrangement of the two bearers E E¹, the shoulder gauges D D¹, the holding recess B, and the back gauge M; such being for the formation of rebates on opposite sides of "stuff" by a plane, so as to make a tenon on such stuff, as described.

I also claim the combination of the adjustable bars L K¹ with the tool bearers E E¹, the shoulder gauges D D¹, the holding recess B, and the stop bar M, arranged and applied together substantially as specified.

No. 29,590.—JOHN S. HALL, of West Manchester, Pa.—*Improvement in Ploughs*.—Patent dated August 14, 1860.—This invention consists in uniting the standard of a plough to the beam by means of a ratchet and flanged plates, which admit of several adjustments that are very advantageous in implements of this kind.

Claim.—Uniting a plough standard to a plough beam by means of ratchet and flanged plates arranged on the sides of the beam and standard, so as to admit of folding up, substantially such as described.

No. 29,591.—JOHN S. HALL, of West Manchester, Pa.—*Improvement in Ploughs*.—Patent dated August 14, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A shoe or support as a device for fitting a straight handle to the back of a mould board of a plough, when said shoe is made as described, of cast or wrought iron or of steel, and bolted or rivetted to the mould board, as stated.

No. 29,592.—LYMAN E. HAWKINS, of Sangamon, Ill.—*Improvement in Cultivators*.—Patent dated August 14, 1860.—In using this machine, the wheels run in furrows on each side of a row of plants, which row is cultivated by the two conveying shovels J J; the shovels I I at the same time loosen the earth on one side of each adjacent row; then, in returning the machine over the field again, these unfinished rows will be completely cultivated.

Claim.—The arrangement of the oblique stocks J¹, ploughs J, vertically inclined stocks I¹, ploughs I, rods *a b*, frame A, axletree B, wheels C C, pole D, lever E, and seat G, as and for the purpose shown and described.

No. 29,593.—ANDREW A. HENDERSON, of Philadelphia, Pa.—*Improvement in Reaping and Mowing Machines*.—Patent dated August 14, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The rake 4, having an upright part and obliquely descending prongs, in combination with the endless chain or rope, arranged and operating as described, for the purpose of discharging the grain in gavels at intervals.

No. 29,594.—ANDREW A. HENDERSON, of Huntingdon County, Pa.—*Improvement in Machines for Reaping and Raking Grain and Mowing Grass*.—Patent dated August 14, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the rake e and horizontally travelling endless belt or chain, to which it is attached, with the platform K^1 and sideboards $a b$, or their equivalents, substantially as described, for discharging the grain in gavels at intervals.

No. 29,595.—JASON G. HOWARD, of South Braintree, Mass.—*Improved Machine for Applying Washers to Tacks*.—Patent dated August 14, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, the combination and arrangement of the lifter O and vibrating hopper M , or their equivalents, with the tack adjusting chute L , the same being made to operate together substantially as explained.

Also, the combination of the agitators $T T$, or their equivalents, with the lifter O and the vibrating hopper M , the said agitators being made to operate therewith substantially as and for the purpose specified.

Also, the combination of the notched tack-receiving and carrying wheel K^1 , and the lever u , or the tack-separating mechanism, as described, with the adjustable chute L , receiving tube I , and its mechanism for driving the tack into the leather as described.

Also, arranging and combining, with the tack-adjusting chute L , mechanism for agitating the same laterally in the manner and for the purpose set forth.

Also, combining the nippers or jaws $a^2 a^2$ with the punch plate carrier c^2 , so as to be movable therewith substantially as described.

Also, the combination of a spring presser g^2 , as described, with the tack-receiver I and its operating arm or lifter bar G .

Also, the combination of the auxiliary discharger z^1 , with the carrying wheel K^1 , and the receiving tube I .

Also, the combination of the lever plate l^1 and its spring m^1 , or equivalent mechanism, with the chute L and the carrying wheel K^1 , the said lever plate being arranged in the manner and to operate with the chute and wheel as explained.

No. 29,596.—JOHN MORRISON HUNTER, of New York, N. Y.—*Improvement in the Preparation of Glue*.—Patent dated August 14, 1860.—This invention consists in manufacturing glue from ordinary refuse scraps of whale blubber.

Claim.—The above described glue as a new article of manufacture, the same being made from whale blubber scraps substantially as described.

No. 29,597.—SABIN HUTCHINS and JOSEPH D. LEACH, of Penobscot, Me.—*Improved Churn*.—Patent dated August 14, 1860.—The dasher of the churn C may be operated independently of the pump, and the pump may be operated independently of the churn, as circumstances may require. The cover of the churn has a large central aperture through which the dasher rod plays, and this aperture has a funnel shaped curb s rising from its periphery, which prevents any waste of cream, while the size of the aperture, which it encloses, allows the air to freely enter the body of the churn and perform its legitimate assistance in the churning process.

Claim.—The arrangement of the churn C , the pump D , the sink B , the lever k , the pitman g , the actuating shafts r and t , the toothed wheels e and f , and the hand crank h , substantially in the manner and for the purpose set forth.

No. 29,598.—NICHOLAS JENKINS, of New York, N. Y.—*Improvement in Wagons*.—Patent dated August 14, 1860.—This invention consists in combining the springs with friction plates and set screws in such a manner that their action can be regulated according to the load on the wagon; and, also, in arranging each spring with a separate tension nut, so that its action can be regulated, and that its tension can be increased if the load in the wagon requires it.

Claim.—The combination, with the springs $A A$, of friction plates G , springs g , and set screws h , constructed and operating substantially as and for the purpose described.

No. 29,599.—JOSEF JOHNSON, of New York, N. Y.—*Improved Clothes Dryer*.—Patent dated August 14, 1860.—The claim and engravings explain the nature of this invention.

Claim.—In combination, with the hinged frame or rods $A B C$, and suspending cords $F G H$,

the straining cords L M or N, operating to secure and release the rods, and the whole being arranged for action together substantially as specified.

No. 29,600.—HERMANN JURY, of New York, N. Y.—*Improved Spring Mattress*.—Patent dated August 14, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of wire frame cells and springs A, in combination with smooth fastening plates D D, in the manner described, and for the double purpose of increasing the flexibility of the wire frame, and obviating the necessity of cord or wire bindings, as set forth.

No. 29,601.—LATHROP KAZAR, of Leroy, Ill.—*Improvement in Adjustable Mole for Mole Ploughs*.—Patent dated August 14, 1860.—This improvement consists in a new mode of constructing the mole or drain plough, by means of which, whilst the upper part of the underground or ditch is left in a solid and compact form, the sides and bottom will be left uncompressed that the water may percolate freely through them.

Claim.—The peculiar arrangement of the landsides A, with respect to the adjustable apron C, as operated, and inclined plane D, the whole being constructed in the manner and for the purposes set forth.

No. 29,602.—WILLIAM KENYON, of Steubenville, Ohio.—*Improvement in Gas Pipe Cutters*.—Patent dated August 14, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of a chisel D of a gas pipe cutter, with a stationary and a revolving chuck F and A, a crank shaft U, bevel gearing I H, cog wheels B C, and screw shaft J, or their equivalents, for the purpose of revolving the chuck F and feeding the cutting tool D forward by the automatic action of the parts of the implement, substantially as set forth.

No. 29,603.—WILLIAM KIMMELL and DANIEL KIMMELL, of Cambridge City, Mass.—*Improvement in Stump Extractors*.—Patent dated August 14, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination and arrangement of the capstan B, lever D, and shiftable roller C, for applying the power at different speeds, substantially as set forth.

No. 29,604.—PATRICK KENNEY, of Providence, R. I.—*Improvement in Valve Gear for Steam Engines*.—Patent dated August 14, 1860.—This invention consists in the arrangement of two tripping bars connected with the rock shafts, which carry or operate two induction valves, admitting steam to opposite ends of the engine cylinder, in combination with a single rocker having an adjustable toe, whereby the induction of steam is enabled to be effected in a positive manner at the commencement of the stroke of the piston, and the cutting off is enabled to be effected at various points in the stroke of the piston, under the control of the governor, by the hand of the engineer.

Claim.—The arrangement of the two tripping bars L L, jointed to arms of the valve rock shafts, and working on guides or stops M M, in combination with the single rocker N and its adjustable toe d, the whole operating substantially as described.

No. 29,605.—G. H. LAUB, of Newark, Mo.—*Improvement in Carriage Springs*.—Patent dated August 14, 1860.—This invention consists in the arrangement and combination of compound flat and curved springs, with curved lever arms controlled by segment gear and a spiral spring.

Claim.—The arrangement and combination of flat curved springs C C, and arms A A¹, when said arms are controlled by the segment gear on the contiguous portion of said arms, and by the action of the spiral spring K, as described and represented.

No. 29,606.—JAMES B. LYONS, of Milton, Conn.—*Improvement in Stump Extractor*.—Patent dated August 14, 1860.—This invention consists in the employment of a jointed tripod frame work, constructed of strong timber, and suitably braced, to which are applied pulleys, a block and tackle, grapple hooks, a capstan, and two large hand wheels, which answer the purpose of carriage wheels for moving the frame about from place to place.

Claim.—The combination, with a jointed frame A A and B, as described, of the wheels F F, serving a twofold purpose, gear wheels p G, drum H, pulleys c c c, and block and tackle I J, all arranged and made to operate in the manner and for the purposes described and represented.

No. 29,607.—R. M. LYTHER, of Triune, France.—*Improvement in Portable Scaffolds*.—Patent dated August 14, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim, first, connecting the posts by means of transverse girders,

arranged substantially as described, so that one or more may be taken out or put in without displacing the other parts of the frame.

Second. Arranging the bands confining the girders to the posts, so as to form splicing sockets to receive the two ends of the post at the point where it is spliced.

Third. The combination of a double wedge, with two bands for strengthening the splicing of the post, when arranged substantially as described for the purpose set forth.

No. 29,608.—JOHN MAGEE, of Lawrence, and WILLIAM J. TOWNE, of Newton, Mass.—*Improvement in Stoves*.—Patent dated August 14, 1860.—This invention consists in the peculiar arrangement of the valve box and valve, and their leading and discharging conduits relatively to the mouth of the furnace and the smoke escape passage in rear of the fire-pot.

Claim.—The described arrangement of the valve box, its valve and leading and discharging conduits relatively to the mouth of a furnace, and a discharge opening situated in the rear of the fire-pot, as specified.

No. 29,609.—ROBERT MARCHER, of New York, N. Y.—*Improvement in Enamelling Picture Frames, &c.*—Patent dated August 14, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the combination of a movable tool, mounted substantially as described, for laying enamel or composition on curvilinear frames, with a face plate carrying the frame to be enamelled, and a pattern of the form required to move the tool, substantially as and for the purpose specified.

And I also claim the combination of two or more movable tools, mounted substantially as described, so that each shall be capable of independent motions, with the face plate carrying the frame to be enamelled, and two or more patterns, one for imparting the required motion to each tool, substantially as and for the purpose specified.

No. 29,610.—CHARLES MARSTON, of Viroqua, Wis.—*Improvement in Grain Harvesters*.—Patent dated August 14, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, operating the two sickles *G G* through the medium of the levers *k k*, reciprocating slotted plate *F*, vibrating lever *g*, actuated by the crank *c* of the shaft *E*, which derives its motion from the wheel *C*, substantially as set forth.

Second. Operating the rake *K*¹, intermittingly through the medium of the teeth *w*, arranged in sections on wheel *D*, and the pinion *v* on shaft *M*; and also the crank pulley *L*, connected by the pitman *u* with the sweep or bar *I*, having the slide *J* with the pendant *s*, and the rake bar *j* attached; all being arranged substantially as described.

Third. The arrangement of the endless bands *a*¹ *c*¹, in connection with the binding clamps *f*¹ *g*¹ and their operating mechanism, substantially as shown, whereby the gavels are conveyed to the clamps, bound, and the sheaves conveyed to the platform *T*, for the purpose of being discharged in shocks.

Fourth. The platform *T* attached to the shaft *U*, as shown and described, and provided with the bars *X V*¹, the bar *X* having a pin *p*¹ attached, and also a cord *l* and the weight *o*¹ connected to it, the cord being arranged with bar *V*¹, and the latter provided with the catch *k*¹, to operate as set forth.

Fifth. The arrangement of the shafts *B*¹ *B*² with the castor wheel arbor *r*, and the cam *C*¹, as shown, for the purpose of elevating the front part of the machine when required.

Sixth. The arrangement of the castor wheel *Y* with the pinion *s*¹ on its arbor *r*¹, the segment *t*¹, and lever *z*, connected with the neck yoke of the team or with the mechanism of any motor, to operate as set forth.

No. 29,611.—JOHN MAURER, of New York, N. Y.—*Improvement in Bottles*.—Patent dated August 14, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement of the doubly inclined channel *a*, around the spout *B* of a bottle, in combination with an opening *b*, in the side of said spout and at the lowest point of said channel, substantially as and for the purpose specified.

Second. The combination of the doubly inclined channel *a* with the packing ring, substantially as described, so that, by the action of the channel, the packing ring is protected against the injurious influence of such portions of the contents of the bottle which, in pouring out, may run down on the outside of the spout.

No. 29,612.—P. G. McCULLA, of Philadelphia, Pa.—*Improvement in Grinding Mills*.—Patent dated August 14, 1860.—This invention relates to certain improvements in that class of grinding mills in which a conical, rotating grinder is placed within a correspondingly shaped stationary shell, and which mills have crushing devices attached.

Claim.—The arrangement for operation together of the conical chamber *B*, egg-shaped chamber *C*, conical grinder *E*, having scalloped or concave terminals *f*, and cylinders *F G*, armed with cutters *g h*, in the manner and for the purposes described.

No. 29,613.—WILLIAM RILEY, JR., of Reading, Pa.—*Improvement in Nail Plate Feeders*.—Patent dated August 14, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement of the plate box in such a position that the plate shall be delivered from the box for reception by the nippers, by a lateral movement, to a position in front of the nippers, or between the nippers and the cutters, substantially as described.

Second. The means of operating the plate I^1 , by which the nail plates are forced from the box to be received by the nippers, consisting of the pinion J^1 , shaft J , pinion J^2 , toothed sector J^3 , arm J^4 , stud x , rod J^5 , lever Y^1 , and cam Y ; the whole combined and arranged substantially as specified.

Third. The described mechanism for drawing back the nippers to withdraw the plate from the cutters, preparatory to turning it over and for feeding it up to the cutters, consisting of the oscillating friction sector X^1 , the friction wheel X^2 , the spur wheel X^3 , and the rack v , applied and operating substantially as described.

Fourth. The described mechanism for raising and turning the nipper shaft, consisting of the plane lifters W^4 and V^2 , the rod F^4 and bearing F^2 , the rods V^3 and V^7 , the sector R , the loose pinion f and its pawl f^2 , and the fast toothed collar F^5 , on the nipper shaft; the whole applied, arranged, and operating substantially as specified.

Fifth. The combination of the chain sector S , the sleeve U , with its cams V W X , and the clutch Z ; the whole applied substantially as described, upon the same rock shaft, and in connection with the carriage E , which carries the nippers, substantially as and for the purposes specified.

Sixth. The mechanism for operating the clutch Z , consisting of the reverse cam T , the lever 25 , the rock shaft 21 , with its several arms, and the tappet 28 , attached to the carriage; the whole applied and combined substantially as set forth.

No. 29,614.—E. H. PLANT, of Plantsville, Ct.—*Improvement in Attaching Thills to Carriages*.—Patent dated August 14, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The employment of the wedge E , screw e , and nut H , in combination with the axle A , slotted plate G , strap D , bar F , and pintle G , as shown and described, so that, by depressing the wedge E , the strap D , with the pintle G , will be carried towards the plate C , and the bearing of the pintle G , between the strap D and the end of plate C , will be tightened, all as set forth.

No. 29,615.—GEORGE W. RAINS, of Newbury, N. Y.—*Improvement in Steam Boilers*.—Patent dated August 14, 1860.—This invention consists of a boiler composed of a lower annular water chamber and an upper annular water and steam chamber, connected by two or more concentric circular series of upright water tubes, the inner series of which have bars arranged between them, extending from their bottoms, where the grate is placed, nearly to the top thereof, to form a central circular fire box; and the outer series of which are surrounded by a curtain-like cylinder, extending from the bottom of the upper steam and water chamber nearly to the lower water chamber; the whole being surrounded by an iron casting with which the chimney is connected.

Claim.—The combination of the upper and lower annular chambers A B , connected by two or more series of water tubes C C D D , the bars F F , or other filling between the inner tubes, the curtain-like cylinder G , and the outer casing H ; the whole arranged substantially as specified.

No. 29,616.—GRAFTON I. RICE, of Frederick City, Md.—*Improved Sugar Grinding Mill*.—Patent dated August 14, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement and combination of two cylinder rollers, having pins or projecting points on the surface of each, both revolving together at different degrees of speed, in combination with the movable bottom J , which extends over and protects cylinder F from the pressing weight of the sugar and jarring mechanism, substantially as and for the purposes specified.

No. 29,617.—O. L. RICHARDSON, of Athens, Ga.—*Improved Curb for Mill Stones*.—Patent dated August 14, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The employment of a curb C , composed of two parts a b , the upper part b being provided with a flange c , and the two parts a b being separated by the interposed ribs or fans D , leaving an air space d , and an air escape orifice at the upper edge of the part a , over which the edge of the part b projects; all as shown and described, for the purpose set forth.

No. 29,618.—MARK RIGELL, of Dawson, Ga.—*Improvement in Cultivators*.—Patent dated August 14, 1860.—The stocks B B are pivotted or hinged to the beams A, so that, by means of the rods F and the nuts *e*, they can be set at different angles with the beams A. The shackle G performs the office of a self-adjusting connection to the beams A, that of a draft piece to the machine, and also that of a safety draft spring, to prevent sudden strains on the machine.

Claim.—The combination of the spring shackle G, and adjusting bar E, with the beams A A, and stocks B B, arranged and operating in relation to each other, as and for the purpose set forth.

No. 29,619.—JOHN MERRY, of Eldorado County, Cal.—*Improved Mode of Marking Stock*. Patent dated August 14, 1860.—This invention consists in providing a self-advertising brand for stock, by stamping upon suitably shaped buttons the name and location of the owner, and fastening them upon the horn and ear by means of a lock.

Claim.—The application of the owner's name with address, by stamping or otherwise, and the mode of locking or securing the brand.

No. 29,620.—EZRA RIPLEY, of Troy, N. Y.—*Improved Wrench and Pincers*.—Patent dated August 14, 1860.—This invention consists in the arrangement of two wrench jaws A B, on the handle C of a pair of pincers jaws D E, the outer wrench jaw A being filed, and the inner one B fitted upon that of the handle C.

Claim.—The arrangement of the fixed and sliding wrench jaws A B, upon one handle C, of a pair of pincers, substantially as represented; the other handle F, of the pincers, and the sliding wrench jaw being formed to engage together, substantially as herein described.

No. 29,621.—JOHN K. ROBINSON and JOHN M. CLARK, Bellair, Ohio.—*Improvement in Pistons for Steam Engines*.—Patent dated August 14, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim*, first, a piston, composed of a series of solid disks or plates of varying diameter, united by bolts, substantially as described, and for the purpose set forth.

Second. Perforating the bolts which hold the piston plates together, substantially as and for the purpose described.

Third. Adjusting the pressure of the steam upon the packing rings by turning the screw bolts, substantially as described.

Fourth. The combination of the guard plate I, and the tongue piece *i*, with the ring, when arranged substantially in the manner described.

No. 29,622.—JOHN G. ROGERS, of San Francisco, Cal.—*Improvement in Tool Handles*.—Patent dated August 14, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The attaching of the handle C, to the pick A, or other tool, by means of the straps B B, bands D D, and the steel rod *d*, placed transversely in the handle C, and having its ends projecting from the handle and fitting in the holes *e*, in the straps, substantially as described.

No. 29,623.—WILLIAM RUSSELL, of Stoughton, Mass.—*Improved Wrench and Vise*.—Patent dated August 14, 1860.—This invention consists in having a jaw attached permanently to a bar at right angles, and having a screw pass through said jaw, which screw also has a jaw fitted on it, the above parts being used in connection with a detachable handle and socket.

Claim.—The combination of the bar A, jaws B C, screw D, provided with a detachable handle E, and the socket F, arranged as shown to form a new and useful article of manufacture, for the purpose specified.

No. 29,624.—WILLIAM F. SCHROEDER, of Laporte, Ind.—*Improvement in Seed Planters*.—Patent dated August 14, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the manner of connecting and operating the spades for the purpose of regulating the depth the holes are to be dug, or to throw them out of operation when desired.

Second. The arrangement of the conducting pipes, in combination with the spades and feeding cups, operated in the manner and for the purpose substantially as described.

Third. The arrangement of scrapers, when connected with levers operated by the spades, in the manner and for the purpose substantially as set forth.

No. 29,625.—JOHN SEIBERLING, of Philadelphia, Pa.—*Improvement in the Preservation of Caustic Alkalies*.—Patent dated August 14, 1860.—This invention consists in providing a wooden box, coated or glazed on the inner side with a varnish, or japan, of coal tar or asphaltum.

Claim.—Putting up caustic potash, or soda, in small quantities, in wooden boxes previously prepared or coated on their inner sides, and subsequently sealed hermetically, substantially in the manner and for the purposes set forth and described.

No. 29,626.—JACKSON SHANNON, of Dakota, Wis.—*Improvement in Cultivators.*—Patent dated August 14, 1860.—The object of this invention is to obtain an implement which may be used as a seeding machine, to plant seed, either in hills or drills, and also used as an expanding cultivator, the implement operating in either capacity as well as if it were designed especially for each.

Claim.—The traverse bars C C, attached to the bars *a a*, as shown, and used in connection with the planks E E, and seat D, and the axle G, on which the bars *a* are fitted loosely, substantially as and for the purpose set forth.

No. 29,627.—GEORGE SLUSSER, of Hillsboro', Ohio.—*Improvement in Animal Traps.*—Patent dated August 14, 1860.—Over the inner edge of the portion B of the base of the frame of the trap, there is pivotted, either at the top E of the trap box, or to the sides D D thereof, a strip H, which has a series of wires or rods *c c c*, descending vertically from its lower edge and forming a grating. There also descends, in an outwardly inclining direction from the strip H, a bait holder *b*.

Claim.—Combining the rollers *d d*, with the rear portion B, of the base frame of said trap, in the manner and for the purpose set forth.

No. 29,628.—HENRY T. SMITH, of Washington, D. C.—*Improved Bedstead Fastening.*—Patent dated August 14, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A face plate, constructed substantially as described, with a projecting flange arranged to form a straining to the fastening key, and with a double pointed revolving hook arranged to enter a bolt either side, and also with a cup projecting over and forming a guide and guard to the curved hook.

No. 29,629.—JAMES SMITH, of Norfolk, Va.—*Improvement in Ploughs.*—Patent dated August 14, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the peculiar mould board C, herein described, straight edged point or cutter A, and inclined land side bar B, with its movable heel piece D, when said mould board extends down beyond the front end of the land side bar, and the curve of the same is formed by a straight line moving parallel to the edge of the cutter in the path of a cycloid, as and for the purposes set forth.

No. 29,630.—NATHANIEL SNOW, JR., of Boston, Mass.—*Improved Steering Apparatus.*—Patent dated August 14, 1860.—By means of the two plain toothed racks S S, the pinion R, the auxiliary shaft P, the bevel wheel O, and the bevel pinion N, arranged and applied to the shaft K, and the two slides C C, the two right and left screws and nuts are dispensed with.

Claim.—The arrangement of the two racks S S¹, the pinion R, the auxiliary shaft P, the bevel wheel O, its pinion N, the steering wheel shaft K, and the slides C C, applied to and for operating the rudder head, as specified.

No. 29,631.—M. MESSER and A. STEINBRENER, of Cleveland, Ohio.—*Improvement in Hanging Sash of Railroad Car Windows.*—Patent dated August 14, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Securing the sash E¹, in railroad cars, by means of the notch N¹, spring P¹, and dowels G¹, when these several parts are arranged and operated substantially as and for the purpose set forth.

No. 29,632.—W. S. STETSON, of Baltimore, Md.—*Improvement in Harvesters.*—Patent dated August 14, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, supporting the platform *a*, over the axle *d*, of the carriage wheels, and on the shaft *a*¹, by means of the uprights *b*, in such manner that by withdrawing the rods *f f*, and the lever pin *p*¹, the platform can be removed at once from the body of the machine.

Second. Combining the reversible spring lever *k*, with reversible and adjusting lever *j*, as set forth.

Third. So constructing the lever J, and combining with it the axle *d*, and reversible lever *h*, that the said lever J may be readily adapted to raise and lower the cutters, whether the cutters are operating in front or in rear of the carriage wheels, as set forth.

Fourth. Arranging the pawl *u*, and spring *v*, and ratchet *w*, all within an open cylindrical rim *x*, projecting inward from the hub of the driving wheel, whereby the parts are not only protected from rising dust and dirt falling from the driving wheels and disturbance from other

sources, but are convenient to the driver to operate them directly with his hand without the aid of rods or levers.

Fifth. Providing the pawl *u* with a notch *z*, the spring *v*, and the ratchet *w*, so that said parts may operate and be operated as set forth.

Sixth. Changing the position of the cutter bar from rear to front of the carriage wheels, substantially in the manner set forth.

No. 29,633.—HENRY D. STOVER, of New York, N. Y.—*Improved Cutter Head for Rotary Planing*.—Patent dated August 14, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the conical or cone-graduating feed, whereby the operator and stock are both secure when the latter is being entered to the cutters, essentially as set forth.

Second. Such graduating cone feed and revolving, adjustable guard with cutter head, essentially in the manner and for the purposes fully set forth.

Third. Placing and clamping the cutters at an angle with and above each other essentially in the manner and for the purposes set forth.

Fourth. Combining a guide ring *F* with the cutter head, so that the ring shall remain stationary while the cutter head revolves with great velocity within, when such ring and cutter head are kept lubricated by a spiral channel in cutter head or ring to force the oil to every part of the working surface, essentially as set forth.

Fifth. Constructing curved grooves in collars *C* and *X*, and imparting a corresponding reversed shape to the ends of clamp pieces *G* for securely holding them from flying out, even if they should, by any reason, become loose, essentially in the manner and for the purposes fully set forth.

Sixth. Constructing the cutters *K L M* and *Q*, and blanks *O S* and *U*, with dovetail pieces *R P T* and *V*, fitting to corresponding dovetail grooves, formed in main part *B*, to prevent the cutters or blanks from flying out under any circumstances, essentially in the manner and for the purposes fully set forth.

No. 29,634.—HUGH M. STREET, of Denmark, Tenn.—*Improvement in Gearing*.—Patent dated August 14, 1860.—The claim and engravings explain the nature of this invention.

Claim.—So connecting the friction rollers to the cogs of gear wheels by means of journals and slots, or their mechanical substitutes, as that the entire pressure, by which the wheel is driven, shall be exerted on the circumference of the rollers which directly bear on the cogs and on the wheel itself, and that no strain shall rest on the pivots of said rollers, substantially in the manner and for the purposes described.

No. 29,635.—J. B. SUTHERLAND, of Detroit, Mich.—*Improvement in Sleeping Cars*.—Patent dated August 14, 1860.—In this improvement, pins or studs, hooks and grooved plates, on the ends of the platform, are used in connection with bearings or brackets attached to the transverse partitions of the car; the above-named parts being so arranged as to admit of the folding and unfolding of the platforms of the upper berths.

Claim.—The employment or use of the bearings or brackets *D D¹ F F¹ G G¹*, secured to the transverse partitions *E* of the car, in connection with the pins or studs *a* attached to platform *b*, and the pins *b*, hooks *c*, and grooves *d*, in the plates attached to the platform *C*; all being arranged substantially as and for the purpose set forth.

No. 29,636.—JOSEPH F. TANNEHILL, of Staunton, Va.—*Improvement in Seed Planters*.—Patent dated August 14, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A driving and carrying wheel, provided with segments having radial arms for varying its circumference, in combination with a seed-delivering apparatus, substantially such as described or its equivalent.

No. 29, 637.—W. A. TAYLOR and W. W. GRAVES, of Fort Adams, Miss.—*Improvement in Cultivators*.—Patent dated August 14, 1860.—This invention consists in the use of a quadrangular frame capable of being adjusted laterally to adapt the machine to rows of different widths, two ploughs for hill ploughing attached to standards that are secured to the adjustable beams of the frame, said standards being braced to the frame in a peculiar manner, and two scrapers placed in the rear of the ploughs and braced in a novel way.

Claim.—The adjustable beams *E E*, ploughs *d d*, brace rods *b¹*, and the scrapers *G G*, with their standard braces *b b*, and the brace rods *g g*; all combined and arranged in the manner herein set forth.

No. 29,638.—A. THRELKELD, of Boone County, Ind.—*Improved Washing Machine*.—Patent dated August 14, 1860.—The rollers are placed in a straight line, so that when the machine

is put in motion the clothes descend an inclined plane, thus avoiding friction as they move in alternate directions.

Claim.—The arrangement of the roller C, on a straight line with the bottom of box A, in combination with balls D, and corrugated ends E, the whole arranged on rockers B, operating as described and for the purposes set forth.

No. 29,639.—NATHANIEL TUFTS, JR., of Boston, Mass.—*Improvement in Gas Meters.*—Patent dated August 14, 1869.—This invention relates to that class of apparatus for measuring gas, called dry gas meters, in which the gas passing through the same is caused to be registered by the operation of two diaphragms, or chambers having rigid heads and flexible sides like a bellows—for instance, the movements of which diaphragms or chambers by their alternate inflation and collapse impart, by means of suitable devices, a continuous motion to suitable indicating hands.

Claim.—In combination with the supplying pipe *p p*, the double-headed independent bellows connected at its rear head or plate with the said pipe by a screw joint or otherwise, as set forth.

No. 29,640.—ISAAC C. TWINING, of Wrightstown, Pa.—*Improvement in Automatic Rakes for Harvesters.*—Patent dated August 14, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement of the wheels I K G, toothed at their peripheries in sections, in connection with the bent bar O, cam H, and rake bar L, attached to the upper surface of the wheel K, substantially as and for the purpose set forth.

Second. The arrangement with the wheel I, of the pinions *d e*, cam *g*, and lever G¹, and spring *c*, substantially as shown, for the purpose of giving the necessary dwells or cessations of movement to the rake, as and for the purpose set forth.

No. 29,641.—WILLIAM VAN ANDEN, of Poughkeepsie, N. Y.—*Improvement in Machines for Cutting Files.*—Patent dated August 14, 1869.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, striking a series of blows on a chisel in combination with the file blank while in a state of rest and in the same tooth, for the purposes as heretofore set forth and described.

Second. The formation of the self-adjustable chisel holder, viz: by the combination of the shell X¹, the yielding or loose back X², the nut or slide X³, the chisel X⁴, spring X⁵, or their equivalents, for the purposes heretofore set forth and described.

No. 29,642.—G. W. VAN DEREN, of Big Flats, N. Y.—*Improvement in Steam Engines.*—Patent dated August 14, 1869.—This invention consists in arranging in the interior of a semi-circular cylinder, to which the steam is admitted through passages in its end, two pistons, connected by a curved piston rod, so that the steam acts alternately on the two pistons with its full force, and an oscillating motion of said pistons is produced, which, by connecting a pin that projects from the middle of the piston rod with the crank pin of the fly wheel shaft, is converted into rotary motion.

Claim.—The arrangement of the two pistons B B¹, connected by a curved piston rod C in the interior of the semi-circular cylinder A, with steam passages *a a*¹ in the ends, constructed and operating substantially as and for the purpose set forth.

No. 29,643.—AMOS WHITTEMORE, of Cambridgeport, Mass.—*Improved Machine for Making Horse Shoe Nails.*—Patent dated August 14, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the mode of operating the shears or cutters, the same being made to advance at the proper moment to sever the nail from the rod, and then to fall out of the way, substantially as and for the purpose described.

Second. The various parts which constitute the feeding apparatus, consisting of the upright 5, levers S and C, spiral spring *a*, and rod *b*, the whole operating in the manner and for the purpose specified.

Third. The levers *m* and *e*, acting in conjunction to hold the rod while the nail is undergoing its formation, substantially as and for the purpose specified.

Fourth. The sliding frame D, in combination with the chambers H H, each being operated upon substantially as and for the purpose described.

No. 29,644.—FERDINAND WOLF, of Brooklyn, N. Y.—*Improvement in Cultivators.*—Patent dated August 14, 1860.—This invention consists in arranging in a frame work of suitable construction a rotary cylinder or roller, provided with teeth for tearing up the ground, and operating so as to transmit motion to the other devices; and in combining a gang of ploughs,

having a peculiar motion, with rising and falling plates placed transversely to the machine thereby effecting the formation of the hills.

The inventor says: I *claim*, first, the roller B, provided with teeth *a*, in combination with the harrow C, ploughs D, plates E E¹, and the gearing through which motion is given to the several parts, all arranged and operating substantially as and for the purpose set forth.

Second. The combination of the ploughs D with the plates E E¹, operating so as to lay out the ground in regular hills, substantially as described.

Third. The plates E E¹, operated by means of lazy tongs *l*, substantially as and for the purpose specified.

No. 29,645.—WILLIAM WOOD, of Hartford, Conn.—*Improvement in Brick Machines*.—Patent dated August 14, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the construction and arrangement of the spring lever E, for throwing out the mould attached to the rock shaft F, and actuated by the direct action of the arms *c* from the main shaft D, in the manner described.

Second. The arrangement of the two levers A and B, one for pressing down the piston and plate for filling the mould, and the other to lift up the same after the mould is filled, in the manner described, being operated by the direct action of the arms *c* from the main shaft D, as specified.

Third. The adjusting arrangement of the slot, sliding ring, and pins G, attached to the piston rod H, and lever B to regulate the pressure of the piston and press plate, all in the manner and for the purpose as set forth.

No. 29,646.—ALBERT J. ALLEN, of Buffalo, N. Y., assignor to R. ALLEN, of Rock Stream, N. Y.—*Improvement in Steam Gauges*.—Patent dated August 14, 1860.—This invention consists in a certain arrangement of parts and machinery by which the pressure of any steam boiler or other vessel may be accurately determined, if the steam or other fluid from such boiler or vessel be properly applied.

The inventor says: I *claim*, first, the combination of lever E with capsule C, the said lever being so constructed and arranged as to have a bearing upon the capsule upon one side of its fulcrum *e*, and a bearing upon a spring upon the other side of its fulcrum, for the purposes and substantially as described.

Second. The combination and arrangement of spring F with lever E and capsule C, substantially as set forth.

Third. The combination and arrangement of lever E, fulcrum block D, capsule C, spring F, and stop G, substantially as shown and described.

No. 29,647.—ALLEN S. BALLARD, of Mount Pleasant, Iowa, assignor to himself and JOSEPH HOWE, of the same place.—*Improvement in Ditching Machines*.—Patent dated August 14, 1860. This invention consists in constructing a plough with an inclined bottom, and furnishing it with a series of cutters and wings, arranged in such a way, and combined with two carriage wheels and an adjustable mechanism, that the plough will dig into the earth any desired depth to form a ditch or trench, and elevate the earth as rapidly as it is loosened by the cutters, which, after being elevated to the surface, will be thrown off from each side of the ditch by the wings of the plough and a scraper that follows in the rear of the machine.

Claim.—The plough G G¹, constructed substantially as described, with or without the movable bottom, in combination with the horizontal cutters *k k k*, cutters *e e*, and carriage A B, the whole being arranged and operating in the manner and for the purposes set forth.

No. 29,648.—FREDERICK H. DRAKE, of Middletown, Conn., assignor to himself and JONATHAN S. CHRISTIE, of New York, N. Y.—*Improvement in Sewing Machine Needles*.—Patent dated August 14, 1860.—This invention consists in making two or more eyes in the needle near its point, or where the eye of a sewing machine needle is ordinarily made, through which eyes the needle thread is passed.

Claim.—Making a perforated sewing machine needle substantially as described and represented.

No. 29,649.—J. F. FLANDERS, of Boston, Mass., assignor to himself and E. G. ALLEN, of the same place.—*Improvement in Leather Splitting Machines*.—Patent dated August 14, 1860. The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement of sectional rollers for the direct or immediate support of the hide or leather at the delivery of the same to the edge of the circulating knife, in combination with a roller located below the sectional roller and constructed as described, with elastic surface and fixed bearings.

Second. Placing the sectional roll to one side of the vertical axis of the elastic roll, as described.

Third. Holding the leather and controlling its progress while passing through the machine by means of a brake operating substantially as described.

No. 29,650.—H. M. JACOBS, of Hartford, Conn., assignor to THOMAS J. VAIL, of the same place.—*Improved Machine for Burnishing Spoons*.—Patent dated August 14, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement of the burnishers K attached to the arms J, the screw rod L, connected with the burnishers by the nuts j, the ratchet l, pawl N, and the lever M, actuated substantially as shown, for the purpose of feeding the burnishers laterally across their work as described.

Second. The adjustable rod Q, provided with springs R R, fitted in the upright H, having its springs R resting on the arm J of the burnishers, for the purpose of graduating the pressure of the burnishers on the bowls of the spoons, as set forth.

Third. The curved plate S when combined with the rod Q, having the springs $b^1 b^1$ attached and arranged relatively with each other as shown, for the purpose of causing the burnishers, while moving back and forth, to conform to the longitudinal profile of the bowls.

No. 29,651.—EDWIN A. LELAND, of Brooklyn, N. Y., assignor to himself and JOHN BENSON, of the same place.—*Improved Paint Can*.—Patent dated August 14, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The construction of the can with two lips, as shown, one of which is formed into a shoulder a or e to support the cover C, while the other lip A, composed of soft, flexible metal, is bent over upon and made to seal the cover C, when the latter is to be closed, but when the can is to be opened the said lip A is bent up to a perpendicular position, so that the cover may be removed, all without any soldering or cutting, as and for the purpose specified.

No. 29,652.—DOUGLASS F. MALTBY, of Waterbury, Conn., assignor to the WATERBURY BUTTON COMPANY, of same place.—*Photographic Medal*.—Patent dated August 14, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The article which I have described and termed a "photographic medal," composed of a ring or plate of solid metal, constituting a frame or rim of a medallion character surrounding one or more pictures produced by photography.

No. 29,653.—AARON MILLER, of Brockport, N. Y., assignor to himself, GEORGE B. WHITESIDE, GEORGE F. BARNETT, and JOSIAH M. LANE, of the same place.—*Improvement in Corn Planters*.—Patent dated August 14, 1860.—As the rear end of the lever a is pressed up to the handle the slides V V are drawn forward and the seed discharged through the teeth. When the distributors are operated by the wheel E, the discharge of the seed can be suspended by grasping the handle and lever a and pressing them together.

Claim.—The arrangement of the slide V, rollers P, levers $a r j j$, rods $c c d d$, and wheel E, as described, and for the purposes specified.

No. 29,654.—BRADFORD STETSON, of Uxbridge, Mass., assignor to himself and ELMER TOWNSEND, of Boston, Mass.—*Improvement in Turbine Water Wheels*.—Patent dated August 14, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Arranging the slotted plate E and its shaft C with the wheel A and its shaft B, joining the two shafts B and C by the disks $m n$ and screw o , connected as described, and applying the plate E to the buckets and the latter to the wheel heads, as specified.

No. 29,655.—SAMUEL T. ADAMS and DAVID ADAMS, of Medina, Ohio.—*Improved Washing Machine*.—Patent dated August 21, 1860.—A is the box with elevated ends, to prevent the water from being thrown out by the action of the machine; B B are legs which support the machine; C is an upright secured on the outside of box A; D is a concave wash bottom formed of the cross pieces $d d$; said wash bottom is supported by the springs $D^1 D^1$; E is a rubber, the rubbing portion of which is composed of the spiral fluted rollers $e e$; $E^1 E^1$ are rounds which are made fast to the sides of the rubber to keep them together, and also to furnish handles for operating the rubber.

Claim.—The arrangement of the spiral fluted rollers d , yielding concave bottom D, springs $D^1 m$ and L, box A, upright C, rubber suspension arms F F, shaft G, crank H, slide boxes I I, the whole being constructed and arranged for operation conjointly as and for the purposes set forth.

No. 29,656.—DENNIS ALDRICH, of St. Louis, Mo.—*Improvement in the Construction of Tanning Apparatus*.—Patent dated August 21, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination in the manner shown and described of air-tank X, with air-pump attached, air-pipes E E, tan liquor tanks L L, lime tanks O, and bate tanks N, so that the liquid may be changed or moved by atmospheric pressure, to and from each and every tank thus combined, all as set forth.

Second. Providing the leeches with inclined bottoms, in connexion with false bottoms, which have their central portions perforated, when the said inclined portions extend upward from the said perforated portions toward the walls of the vats, as and for the purposes set forth.

Third. The combination, with the frames G G, of rockers *e e*, attached to rock shaft *d*, for the purpose of imparting a reciprocating motion to the frames G G, substantially as described.

Fourth. The construction of the reels F, with radial slotted partitions forming several compartments, and with a hinged door to each compartment, substantially as and for the purpose specified.

Fifth. The employment in the pipes 6 of three way cocks 2, when applied so as to open communication at either the upper or lower part of said pipes, as described.

No. 29,657.—DANIEL ARGERBRIGHT, of Gratis, Ohio.—*Improved Combined Chuck and Counter Sink*.—Patent dated August 21, 1860.—This invention consists in the combination and arrangement of the different parts.

Claim.—The circular piece B, in combination with clamps *b b b b*, knives *d d*, adjusting screws *i i i i*, and guide pins *a a a a*, when the whole shall be constructed and operated substantially as and for the purpose set forth.

No. 29,658.—DANIEL ARNDT, of Zanesville, Ohio.—*Improved Bee Hives*.—Patent dated August 21, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the employment or use of sand paper or ground glass B, applied to the exterior of a bee hive around its entrance, or within a hive, at suitable places, for the purpose specified.

Second. The water tank or reservoir C, provided with necessary eduction and induction pipes *e g*, placed within a hive A, substantially as and for the purpose set forth.

No. 29,659.—JACOB B. ASHE, of Elkton, Md.—*Improvement in Grubbing Machines*.—Patent dated August 21, 1860.—This invention consists in the combination and relative arrangement of the hooks A, slots B, rollers C, and hand levers D.

Claim.—The combination and relative arrangement of hooks A, slots B, rollers C, and hand levers D, substantially as and for the purposes set forth.

No. 29,660.—EDWARD BACKUS, of Rochester, N. Y.—*Improved Propeller for Canal Boats*. Patent dated August 21, 1860.—Steam may be conveyed from the boiler to the engines through any flexible pipe. The wheel B may be ten feet in diameter, more or less, with ribs on its periphery, and is raised by the windlass E. By placing the wheel in the rear of the axis of the frame C, the power is applied more directly, and the wheel less liable to slip than when it is located in front or even beneath.

Claim.—The arrangement of the engines D, frame C, wheel B, and windlass E, the whole constructed and operated substantially as and for the purposes specified.

No. 29,661.—CHARLES L. BARRITT, of New York, N. Y.—*Improvement in Scythe Fasteners*. Patent dated August 21, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The plate *b*, as described, for adjusting and holding the shank of a scythe, by means of adjustable wood or other wedges, in combination with the cap plate *h*, and ring and wedge *j* and *k*, or their equivalents, when used for the purposes set forth.

No. 29,662.—JOHN H. BEADLE, of New York, N. Y.—*Improvement in the Construction of Breast Pumps*.—Patent dated August 21, 1860.—This invention consists in combining the pump barrel with the glass tube leading from the cup in such a manner that said tube forms the piston rod, and that by imparting a reciprocating motion to the barrel the operation of pumping is effected.

Claim.—A breast pump, having in combination the reciprocating barrel D, tube C, packing *c*, and valves *b* and *e*, constructed and operating substantially as and for the purpose specified.

No. 29,663.—WILLIAM BLAKE, of Boston, Mass.—*Improvement in Cleansing Galvanized Iron Pipes*.—Patent dated August 21, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A new process, substantially as specified, for effecting the removal of the surplus zinc from a galvanized or zinc coated screw, the essential element of such process being the heating of the tube, or rod, and the putting it in revolution by means substantially as described, against a brush, or equivalent, for producing friction.

No. 29,664.—WILLIAM BLAKE, of Boston, Mass.—*Improvement in Cleansing and Separating Galvanized Nails*.—Patent dated August 21, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* my mode or process, substantially as described, of treating galvanized or zinc coated nails, on their removal in mass from the coating bath or furnace, such process involving the use of gravitation, or a tube, on inclined plane, or slab, and a water bath, in manner as specified.

And I also claim the combination and arrangement of the tube, the inclined plane and the water bath, for the purpose specified.

No. 29,665.—LUDWIG BRUMLEU, of Hoboken, N. J.—*Improvement in the Mode of Making Oxychloride of Lead*.—Patent dated August 21, 1860.—The nature of this invention is shown by the claim.

Claim.—The process, as set forth, in the description of manufacturing oxychloride of lead from chloride of lead and subacetate of lead, leaving in solution neutral acetate of lead free to be used over and over for the same purpose.

No. 29,666.—ROBERT D. BRYCE, of East Birmingham, Pa.—*Improved Attachment of Covers to Glass Vessels*.—Patent dated August 21, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Attaching metallic covers to mugs, pitchers, or other vessels of glass or earthenware, by hinging the upper hinge piece of the cover immediately to the handle of the vessel, or to a knob or projection on or near its rim, thus dispensing with a lower hinge piece of metal, substantially in the manner and for the purpose set forth.

No. 29,667.—A. M. BURNHAM, of Montpelier, Vt.—*Improvement in Machines for Sawing Stone*.—Patent dated August 21, 1860.—This invention consists in the peculiar arrangement of means employed for giving the saws a lateral vibrating motion while working in the usual reciprocating manner to produce the cuts, the lateral movement of the saws admitting of their oblique position relatively to each other, and enabling them to cut simultaneously the two opposite sides of a polygonal taper block.

Claim.—The arrangement of the bar *g*, arms *f*, rock bars *b b*¹, bent lever *E*, the frame *C*, and with the saws *D*, and frame *B*; the whole constructed and operating as shown and described, for the purpose set forth.

No. 29,668.—J. CARL and JAMES W. HEATH, of Grenada, Miss.—*Improvement in Casting Screw Augers*.—Patent dated August 21, 1860.—This invention is chiefly designed to facilitate the construction of augers adapted for boring earth or for analogous uses. Its novelty consists in a peculiar construction and combination of patterns and in the mode of their application to form the moulds.

Claim.—The combination of the shaft pattern *A*, and the segmental spirals *H*¹, constructed, arranged, and applied in the manner set forth, for the formation of moulds for casting spiral augers.

No. 29,669.—DAVID P. CHAMBERLIN, of Hudson, Mich.—*Improvement in Instruments for Pruning Trees*.—Patent dated August 21, 1860.—This invention consists in an arrangement of a cutting hook, in combination with an oblique edged cutting chisel, the two parts operating together.

Claim.—The combination of the oblique cutting blade, with the cutting hook, the parts being arranged and operated substantially as and for the purpose set forth.

No. 29,670.—WILLIAM CLEMSON, of Middletown, N. Y.—*Improved Saw Set*.—Patent dated August 21, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination of the cam *E*, and the spring or trip hammer *H*, with a suitable anvil *I*, arranged for joint operation, substantially as and for the purpose set forth.

Second. Having the cam *E*, slotted radially, and provided with a bar *c*, and screw *d*, substantially as shown, for the purpose of rendering the cam adjustable, to move the saw a greater or less distance, according to the size of its teeth.

Third. The arrangement of the gauge K, formed of the lips *ff*, at the end of the plate L, and the slide M, in connection with the cam E, hammer H, and anvil I, for the purpose specified.

No. 29,671.—WILLIAM CLEMSON, of Middletown, New York.—*Improvement in Tempering Saws*.—Patent dated August 21, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The fixed metal bed A, placed over a suitable furnace, in connection with a suspended pressure metal block D, operated by the inclined plane G, and eccentric I, or other suitable means, to give the block an oblique downward movement towards the bed, as and for the purpose set forth.

No. 29,672.—EPHRAIM CUSHMAN and JOHN R. CUSHMAN, of Amherst, Mass.—*Improvement in the Manufacture of Leather Paper Stock*.—Patent dated August 21, 1860.—The claim explains the nature of this invention.

Claim.—Heating the stock while it is in the beating engine, and removing the impurities as they rise, as set forth, for the purpose specified.

No. 29,673.—GEORGE DANFORTH, of Friendsville, Ill.—*Improvement in Corn Shellers*.—Patent dated August 21, 1860.—Centrally within the box B a series of springs, or elastic bars I, are placed. Their lower ends are bent in a horizontal position, and are secured to the top of the bench by bolts, and have a radial position around an opening *d* in the bench. The other portions are slightly inclined and form a frustrum of a hollow cone.

Claim.—The arrangement together of the short and long springs I, in the manner shown, for the purpose specified.

No. 29,674.—L. B. DARLING, of Providence, R. I.—*Improvement in the Construction of Stone Tanks*.—Patent dated August 21, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A tank or vessel, the bottom and sides of which each consist of one or more pieces or slabs of stone arranged and combined in the manner shown and described, with the plates *c*, horizontal rods *d*, plates B B¹, perpendicular rods C, and rubber packing *a*, all as set forth for the purpose specified.

No. 29,675.—JACOB DAVID, of New York, N. Y.—*Improvement in Combined Shutter and Awning for Windows*.—Patent dated August 21, 1860.—The claim and engravings explain the nature of this invention.

Claim.—I claim hanging blinds or shutters by a pivotted or swivel hinge at the top, using the ordinary hinge at the bottom, and applying hooks *g g*, or their equivalents, to the shutters inside, and a suitable locking bolt to them, so that the shutters will serve either as such or as an awning, in the manner substantially as described.

I also claim, in combination with the above, the side canvas, as described.

No. 29,676.—ARMENIUS DAVIS, of Shelbyville, Ind.—*Improvement in Cane Guns*.—Patent dated August 21, 1860.—This invention consists in providing a self-cocking secret lock, with the cap tube also concealed in the upper end of the cane, so that nothing is to be seen but the finger bolt of the trigger.

Claim.—The arrangement and combination of straight, percussion bar F, and trigger bar D, when these are made with their various peculiarities as shown, and operated as described.

No. 29,677.—JAMES DAYKEN, of Cleveland, Ohio.—*Improved Mode of Elevating and Delivering Water from Wells*.—Patent dated August 21, 1860.—This invention relates to a water drawer, constructed with a bucket, weight, and pulley.

Claim.—The inclined board K, performing the several functions described, in combination with the spouts A¹ and E¹, bucket E, valve M, rod I, rope S, and counterbalance weight F; the whole being constructed, arranged, and operated, in the manner and for the purpose set forth.

No. 29,678.—WILLIAM DECKMANN, of Canton, Ohio.—*Improved Bedstead*.—Patent dated August 21, 1860.—This invention consists in the combination of certain peculiar castings, connecting posts and rails with securing bolts, holding these parts firmly together.

Claim.—The castings A and B, as described, in combination with slides D, and parts operating the same, as applied to bedstead fastenings.

No. 29,679.—JOHN N. DENNETT, of Bath, Me.—*Improved Bed Bottom Slat*.—Patent dated August 21, 1860.—By placing the slat *c* so that the ends only are supported, and at the same

time pressing down gently on the centre, the blocks *a* and *b* slide between the thin strips *g* and *h*, and the slat *c*, each very near its respective end, and when the pressure is removed, the spring of the slat *c* gives the required elasticity and flexibility to the thin strips *g* and *h*.

Claim.—The combination and arrangement of the blocks *a b*, the slat *c*, the blocks *d e*, and the strips *g h*, substantially as and for the purpose specified.

No. 29,680.—HENRY DISSTON, of Philadelphia, Pa.—*Improved Machine for Grinding Saw Blades.*—Patent dated August 21, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, grinding saw blades by placing them on concave or curved plates, and causing the plates to traverse in such a direction, in respect to a revolving grindstone, that the latter shall bend the blades into the concavity of the plates during or prior to the operation of grinding, for the purpose specified.

Second. Combining an endless chain of concave plates *G* with a revolving grindstone, substantially in the manner set forth, so that a continuous succession of blades may be submitted to the action of the stone, as specified.

Third. The combination, with the endless chain, of plates *G*, the adjustable guides *M M*¹, or their equivalents; the whole being arranged and operating substantially as and for the purpose herein set forth.

Fourth. Causing the plates *G*, as they pass beneath the grindstone, to be tilted by means of an inclination in one of the guides, or any equivalent device.

No. 29,681.—AARON DOUGLASS, of Paterson, N. J.—*Improved Lock Joint for Railway Bars.* Patent dated August 21, 1860.—The object of this invention is to obtain a simple and more efficient means for producing the compound lap-joint for railroad rails than that resorted to at present.

Claim.—The process shown and described of making the lock joint, in patent No. 14,868, as set forth.

No. 29,682.—ELBRIDGE G. DYER, of Hamilton, Ohio.—*Improved Feed Motion for Saw Mills.* Patent dated August 21, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the sheaves or pulleys *F*, reversing sheaves or pulleys *H* and *I*, disk *J*, and reversing lever *f*, link *e*, and bars *b b*¹, or their equivalents, whereby motion is communicated to the feed gear of a log carriage in either direction, substantially in the manner described.

No. 29,683.—JAMES W. EVANS, of New York, N. Y.—*Improvement in Fastenings for Cotton Bales.*—Patent dated August 21, 1860.—This invention consists of a piece of wire bent in the shape of the letter *S*, and in such a manner that, in the cross section, the centre part 2 shall be either above or below the plane of the end pieces 3 3, and so much out of the line that two thicknesses of the hoops may be easily passed between the bottom of the centre piece 2 and the top surfaces of the centre pieces 3 3. When the tie is applied for fastening the hoop, one end of the hoop *B* is passed above one end 3 of the tie *A*, below the centre part 2, and over the other end of said tie, around which latter end it is then bent so as to hold fast.

Claim.—The application and use of the metal piece *A*, bent in the shape of the letter *S*, and operating on the hoop in the manner and for the purpose substantially as described.

No. 29,684.—CHARLES FAIRFAX, JR., of Cincinnati, Ohio.—*Improvement in Couplings for Belts.*—Patent dated August 21, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The belt coupling described, consisting of two frames *A A*, jointed together by rods *a a*, and furnished with pins *b b*, substantially as described.

No. 29,685.—GEORGE FARMER, of Oseola, Ill.—*Improvement in Harvesters.*—Patent dated August 21, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the arrangement, as shown and described, of the rack bar *P*, driving wheel *Q*, rake head *J*, shaft *R*, pinion *S*, and section cog wheels *m n*, so that the section wheels will rotate the shaft *R*, first in one direction and then in the opposite, thus causing the rack bar *P* to reciprocate and carry the rake, and also cause the latter to open and close, all as set forth.

Also, the making of the cutters, with their rear ends bent up to fit the back part or edge of the cutter bar, and with their sides bevelled and notched as shown when fastened by the hooked bolts or nuts *d*, in the manner shown and described, one edge of each cutter being held up by a hook, and the opposite end being held up by the overlapping bevel of the edge of the adjoining cutter, all arranged as set forth.

No. 29,686.—DAVID FLANERY, of Jackson, Miss.—*Improvement in Telegraph Instruments.*—Patent dated August 21, 1860.—This invention consists in the arrangement of an electro-magnet and armature, a clock movement and escapement, and a resonance box, to constitute an instrument for the production of sounds alone, or sounds and marks at long and short distances without the aid of a local battery.

Claim.—The arrangement of an electro-magnet and armature, a clock movement and escapement, and a resonance box, substantially as described.

No. 29,687.—WILLIAM F. GEORGE, of Cincinnati, Ohio.—*Improvement in Stoves.*—Patent dated August 21, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, in combination with the outer casing A, the oven H of the herein described peculiar shape and form, the same being made to present a gradually increasing sectional area, in the manner and for the purpose set forth.

Second. Gradually diminishing the area of the annular flue J, between the outer casing A and the oven H, in proportion as the sectional area of the latter is made to increase, in the manner as and for the purpose set forth.

No. 29,688.—CHRISTIAN GERMANN, of Camden, Mich.—*Improved Reciprocating Saw.*—Patent dated August 21, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Varying the pitch of saw teeth as they approach the middle of the blade, and also diminishing their distance apart as they approach the middle of the blade, as and for the purposes set forth.

No. 29,689.—THOMAS M. GREEN, of Milledgeville, Ga.—*Improvement in Seed Planters.*—Patent dated August 21, 1860.—This invention consists in the arrangement of sliding bars and serrated strips and stirrers, fastened to the sliding bars, connecting rods, and driving shaft cranks.

Claim.—The arrangement of the sliding bars C C, and serrated strips G G, stirrers I I, fastened to the sliding bars, connecting rods D D, and driving shaft cranks F F, substantially as and for the purposes set forth.

No. 29,690 —ORIGIN HALL and TIMOTHY MERRICK, of West Willington, Conn.—*Improvement in Machines for Dressing and Finishing Thread.*—Patent dated August 21, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim*, first, the employment of grooves *e*, upon the hot polishing cylinder I, so that an increased extent of thread surface will be exposed to the heat of the cylinder as set forth.

Second. The combination of the four adjustable grooved conducting rollers C C¹ C² C³, with the brush cylinder B, as and for the purpose shown and described.

Third. The combination of the adjustable rack-toothed slides R R, pinions T, roller Q, standards S, and cylinder I, as and for the purpose shown and described.

No. 29,691.—LEONARD HARIMAN, of Anderson, Ind.—*Improvement in Seed Planters.*—Patent dated August 21, 1860.—A represents a suitable frame, in which is journaled a hollow cylinder B, composed of staves, each provided with a number of external apertures *b*. C is a casing of sheet metal, applied to the inner face of each stave, and provided with apertures *c*, corresponding in longitudinal position with the apertures *b*, but differing latitudinally.

The inventor says: I *claim*, first, the construction and arrangement of the teeth E, when combined with a rotary seed planter, as and for the purposes set forth.

Second. The combination of the carriage A, levers I, rod J, catch K, and wheels H, in the manner and for the purposes set forth.

Third. The arrangement of the slides D, springs G, and segmental cam F, constructed and operating in the manner and for the purposes set forth.

No. 29,692.—JOHN M. HATHAWAY, of New York, N. Y.—*Improvement in Handle Fastenings for Augers.*—Patent dated August 21, 1860.—This invention consists in the use of a slotted or notched key, which is movable and slides in or out through the socket part of the handle of the auger or bit transversely to its tang and in proper notches cut therein, so as to firmly fasten it in its place for use, or as readily be made to release it.

Claim.—The application of the slotted or notched key, in combination with the correspondingly notched auger or bit tang, both tang and key being provided with metal bearings, by means of the metal ferule, or its equivalent, the whole being constructed and operating substantially as described, for the purpose stated.

No. 29,693.—ALEXANDER HAY, of Philadelphia, Pa.—*Improvement in the Construction of Railroads*.—Patent dated August 21, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* a railroad chair, constructed substantially as described, for the purpose of holding the rails in place, and, at the same time, supporting a railroad track, and so formed as to be screwed or driven into the foundation, substantially as set forth.

I also claim the groove in the chair, in combination with the groove in the rail, for the purpose of wedging the rail in place, when constructed substantially as described.

No. 29,694.—D. K. HICKOK, of Morrisville, Vt.—*Improved Clothes Dryer*.—Patent dated August 21, 1860.—In using this clothes dryer the standard A being provided with a heavy base fitted in a socket, or held in position by any desired means, the operator, by pulling down the rope G, causes the dryer to expand and have the position, as shown in the engraving; the pins $h h^1$ being in position as shown.

Claim.—The arrangement of the grooved headed standard A, closed cap hub B, pins $h h^1$, and cord G, combined with arms D, braces E, and lower hub c, as and for the purpose set forth.

No. 29,695.—THOMAS HOPKINS, of Newport, Ky.—*Improved Sack Fastener*.—Patent dated August 21, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A sack fastener consisting of two pins or buttons A and A^1 , and a connecting link B, constructed and combined in the manner and for the purposes set forth.

No. 29,696.—HENRY A. HOUSE, of Brooklyn, N. Y.—*Improved Gate*.—Patent dated August 21, 1860.—This invention consists in arranging a knee or toggle joint and two pendulum levers, in combination with two hand levers, in such relation to the gate or gates which are suspended from said pendulum levers, that by depressing either one or the other the levers are forced apart by the action of the toggle joint, and the gate opened and kept open until the toggle joint is brought within a horizontal line drawn through its centre.

The inventor says: I *claim*, first, the arrangement and combination of the toggle arms D D^1 , hand levers E E^1 , pendulum levers B B^1 , and gates A A^1 , constructed and operating substantially in the manner and for the purposes set forth.

Second. The combination with the toggles D D^1 , and hand levers E E^1 , of the weighted hinged dogs F F^1 , arranged substantially as and for the purpose specified.

No. 29,697.—R. B. HUGUNIN, of Cleveland, and G. W. WHITNEY, of Berea, Ohio.—*Improved Washing Machine*.—Patent dated August 21, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim* the arrangement of the grooves or corrugations of the surfaces C D, to run in contrary directions, as and for the purposes shown and described.

We also claim the arrangement and combination of the adjustable pressing lever K, with the shaft B, yoke E^1 , uprights E, disk D, and bottom C, as and for the purposes shown and described.

No. 29,698.—JOHN H. IRWIN, of Beardstown, Ill.—*Improvement in Harvesters*.—Patent dated August 21, 1860.—This invention relates to an improvement in the cutting devices of harvesters, whereby it is believed the sickle is made to work with an even or more regular movement than the ordinary reciprocating ones, with less wear and tear of the parts connected with it, and also to cut with less expenditure of power without being liable to choke.

Claim.—The fingers J, in combination with the sickles K K^1 , and the mechanism for operating them, arranged in the manner described, for the purpose set forth.

No. 29,699.—ADOLPH ISAACSEN, of New York, N. Y.—*Improvement in Construction of Apparatus for Destroying Insects*.—Patent dated August 21, 1860.—This invention consists in the particular arrangement of parts.

Claim.—The new article of manufacture described, composed of the rubber bag or ball A, the nozzle B C, and strainer b , arranged to operate together in the manner set forth.

No. 29,700.—F. C. KUTT, of Hackensack, N. J.—*Improvement in Stopping and Starting Railroad Cars*.—Patent dated August 21, 1860.—This invention consists in arranging on the body a series of double inclined planes, resting on friction rollers, which have their bearings in lugs or standards, projecting up from the truck frame in such manner that when the car is suddenly stopped by applying a chain brake to the axles, the body of the car will be moved backwards and up the inclined planes, where it is held until the car is to start, and on releasing the brakes again the body of the car will move forward down the inclined planes and

impart its momentum to the wheels, so as to start them and enable the horses to proceed with comparative ease.

The inventor says: I *claim*, first, the arrangement of inclined planes *b b* on a car body, in combination with friction rollers *D*, or their equivalents, constructed and operating substantially as and for the purpose specified.

Second. The combination with the car body *E*, upon inclined planes *b b* and rollers *D*, of a chain brake *G*, constructed and operating substantially as and for the purpose set forth.

No. 29,701.—SAMUEL K. LANDES, of West Cocalico, Pa.—*Improvement in Machines for Dressing Mill Stones*.—Patent dated August 21, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the movable frame carrying the band wheels, springs, and cutters, the whole being arranged so as to move from right to left, or the reverse, by the shifting mechanism, substantially as described.

No. 29,702.—BERNARD LAUTH, of Pittsburgh, Pa.—*Improvement in Rolling Iron Bars, &c.* Patent dated August 21, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Holding plates, rods, or bars of iron and steel under tension, longitudinally, by mechanical means, whilst they are being reduced or compressed between rollers, substantially as described.

No. 29,703.—LORENZO LEA, of Jackson, Tenn.—*Improvement in Surveyors' Levelling Instruments*.—Patent dated August 21, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Connecting the bubble block and telescope of a levelling instrument with the tripod or supporting staff by means of a curved spring, in combination with a single set screw, for the purpose of adjusting the position of the level in relation to the supporting staff or tripod, substantially in the manner described.

No. 29,704.—LEWIS LEBER, of Springfield, Ill.—*Improvement in Cultivators*.—Patent dated August 21, 1860.—By operating the hand lever, the cross bars *C¹ C¹* can be raised, and together with them the rear ends of the plough beams, the universal joint at their forward ends serving as the centres of such motion of the plough beams. By this arrangement the ploughs can be adjusted vertically at any required height above the ground.

The inventor says: I *claim*, first, the arrangement of the ploughs *K L* and the cultivator frame, substantially as and for the purposes set forth.

Second. The combination with a cultivator of the swingletree *U*, the crossbar *W*, at the top of an elevated draught pole, two vertical levers *V V*, and an arched yoke *Y*, substantially as and for the purposes set forth.

No. 29,705.—JOHN R. MARSHALL, of Marine, Ill.—*Improvement in Corn Stalk Cutters*.—Patent dated August 21, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the use of the three rollers *A A A*, with knives set longitudinally on their peripheries, in combination with each other; and this I *claim*, not as a combination except when the said rollers are arranged in separate frames, and the said frames are united in relation to each other in the manner shown, and by means of flexible joints, so that the said rollers can follow the uneven surface of the ground, and thus cut the stalks and litter that lie in the hollows and holes thereof.

No. 29,706.—WILLIAM McAFEE, of Summerville, Mich.—*Improved Gate*.—Patent dated August 21, 1860.—The lower part of the post or shaft *A* is of smaller diameter than the upper part, and the former passes through the cylinder *F* and through a hole in the sill, and is allowed to work freely up and down therein. Through the lower part *e*, of the post or shaft *A*, a pin *G* passes transversely and projects a suitable distance from said part and rests on the inclined planes *c c*. The shoulder *f*, formed by the smaller diameter of the part *e* of the shaft has an annular recess *g* made in it to receive the flanch *a* of the cylinder *E*, when the gate is closed. *H H* are two levers, which are attached by fulcrum pins *k k*, to the vertical rods *l l*, which are fitted loosely in the proper guides *m* attached to the gate *B*.

Claim.—The combination, with the central swinging and vertically moving post *A*, in the manner shown and described, of the lifting levers *H H*, rods *l l*, cylinder *E*, inclined edged cylinder within *E*, and pin *G*, for the purpose set forth.

No. 29,707.—T. W. McDILL, of Oquawka, Ill.—*Improvement in Cultivators*.—Patent dated August 21, 1860.—This invention consists of a novel arrangement of adjustable shares.

Claim.—The arrangement of the axle A, and bars *b b k k*, and cross-piece *c*, with the loose connection of the draught pole B¹, to the machine, substantially as and for the purposes set forth.

No. 29,708.—GEORGE C. MILLER and RICHARD HENRY, of Cincinnati, Ohio.—*Improvement in Hillside Ploughs*.—Patent dated August 21, 1860.—This invention consists of a share constructed of one entire piece of steel or wrought iron, in combination with a cast swivel bolted to its underside and intended to supersede the present cast iron shares of this kind of ploughs; also, in a combination, with the reversible mould board, of an adjustable segmental bracket.

The inventors say: We *claim*, first, the described combination of the reversible share and mould board E when formed entire of steel or wrought iron, and the separate cast swivel F, the said parts being constructed, arranged, and connected, in the manner and for the purposes set forth.

Second. The combination of the segmental bracket H, slot *i*, clamp screw G, and mould board E, when constructed, arranged, and operating in the manner and for the purposes set forth.

No. 29,709.—JOHN A. NAYLOR, of Rahway, N. J.—*Improvement in Extension Seats for Carriages*.—Patent dated August 21, 1860.—This invention consists in a new combination and arrangement of parts, whereby the supplemental seat is folded under the other in a novel manner.

Claim.—The arrangement of the removable seat B, supplemental seat C, and hinged braces D, operating together in the manner and so as to produce the effect set forth.

No. 29,710.—LEWIS NEWSOM, of Gallipolis, Ohio.—*Improved Device for Heating Rooms*.—Patent dated August 21, 1860.—This invention consists in so constructing a metallic flue, and letting the same into a chimney, as to close up the flue thereof, so as to require but little of anything else to turn the entire current of smoke and waste heat through said metallic flue.

Claim.—The arrangement of the radiator, constructed as specified in the particular manner described, in relation to the fire-place and chimney.

No. 29,711.—ELON G. NILES, of Cincinnati, Ohio.—*Improved Cooking Range*.—Patent dated August 21, 1860.—This invention consists in a peculiar arrangement of fire-place, oven, and flues, in connection with a small supplementary oven in the main stove or range and a small detachable supplementary furnace, employed for the exclusive heating of the said supplementary oven.

Claim.—The arrangement of the small supplementary oven F, flues H, and damper I, in the described connection with and relation to the detachable supplementary furnace K and flues G of the main furnace B and oven E, the said parts being constructed and combined and operating in the manner and for the purposes set forth.

No. 29,712.—H. W. NORVILL, of Livingston, Alabama.—*Improvement in Car Brakes*.—Patent dated August 21, 1860.—This invention relates to an improvement in that class of car brakes in which the power is applied through the momentum of the cars, as the speed of the latter is checked by the engineer.

Claim.—The employment of the levers H, the bars B, lock bars M, and buffer rods I, arranged to operate substantially as and for the purpose set forth.

No. 29,713.—DAVID P. PATTERSON, of Fayette County, Pa.—*Improvement in the Construction of Distillers' Mash Tubs*.—Patent dated August 21, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination, with the stirring rake of a mash tub, of the perforated steam arms A A¹, constructed, arranged, and operating substantially in the manner described.

No. 29,714.—N. A. PATTERSON and WILLIAM L. RAMSEY, of Kingston, Tenn.—*Improved Washing Machine*.—Patent dated August 21, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The circular perforated and dish-shaped pressure plate E, placed within a tub A, and having the upper end of its shaft *j* fitted in a crank *f*, of a shaft D; all being arranged as and for the purpose set forth.

No. 29,715.—SAMUEL J. PERRY, of Columbia, S. C.—*Improvement in Drawing Boiler Tubes*.—Patent dated August 21, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The instrument composed principally of a screw B, and attached cone or circular

wedge A, a set of connected clamps G G, and a swivel D E F; the whole combined and operating substantially as specified.

No. 29,716.—DAVID RALSTON, of Carlisle, Pa.—*Improvement in Rock Drills*.—Patent dated August 21, 1860.—The frame B consists of two vertical bars C C, and two horizontal bars H, which are framed together in a substantial manner between the two vertical bars. The drill D is secured, passing through guides H, near the top and bottom of said bars. C represents a strong spring which is secured between the two bars running parallel to them. This spring has its fulcrum at the set screw J, and is provided with an opening near its vibrating end through which the drill D passes.

Claim.—The arrangement of the adjustable frame B, the spring C, the drill D, the cross-head E, and guides F, with the connecting rod *a*, the bell-crank *b*, the ratchet *c*, and the ratchet wheel *d*; the several parts being constructed and connected substantially as and for the purpose specified.

No. 29,717.—ALBERT C. RICHARD, of New York, N. Y.—*Improvement in Devulcanizing Waste Rubber*.—Patent dated August 21, 1860.—In this invention the waste rubber, before being subjected to the devulcanizing process, is ground to powder between rollers, and having been made in the fire-place B to heat vessel A, and under the boiler to generate steam. The vessel A is charged and closed up, and steam admitted freely thereinto, in a properly regulated stream, by opening a cock in the pipe H, while its interior is kept heated by the fire to a temperature of over 600°. The steam circulates freely through the vessel A, and escapes by the outlet D, to the chimney along with the sulphureous vapors which are extracted from the rubber by the heat.

Claim.—The described process by which waste vulcanized rubber is devulcanized, all as set forth.

No. 29,718.—JACOB H. REIGHARD and C. L. KNECHT, of Birmingham, Pa.—*Improved Attachment for Hinged Covers of Glass Vessels*.—Patent dated August 21, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We claim attaching caps or covers to mugs, or other articles of glassware, by means of a hole pressed through the glass handle of the vessel, through which is passed a metallic pin attached to or forming part of the hinge of the cover, constructed and secured in the manner described.

No. 29,719.—A. RODEN, of Talladega, Ala.—*Improvement in Presses*.—Patent dated August 21, 1860.—This invention consists in the arrangement of two levers and toggle joints in combination with the follower of a press.

Claim.—The arrangement of two levers K N, and toggle joints G H, in combination with the follower of a press, substantially as and for the purposes set forth.

No. 29,720.—JOSEPH B. SARGENT, of New Britain, Ct.—*Improved Picture Nail Head*.—Patent dated August 21, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A head or knob made in three parts, substantially as described.

No. 29,721.—JOHN P. SCHENKL, of Boston, Mass.—*Improvement in Umbrellas*.—Patent dated August 21, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim not only applying the slider or runner to the joint ring of the rib struts in such manner as to enable such slider to carry such joint ring and be turned or revolved therein and on the stick, but in constructing such slider and the stick with the bayonet studs and catches, or equivalent latching devices, applied to them, substantially in manner and to operate as described.

And in combination with the joint ring and the slider applied to it, and furnished with bayonet catches, as described, I claim constructing both bayonet catches with inclines or cams, and applying a retractive spring to the joint ring and the slider, so as to turn such slider in a direction contrary to that in which it may be moved by either cam, in order to effect the latching of a bayonet catch on its stud at either the opening or the closing of the umbrella.

I also claim the application of the rib cap and its retractive spring directly to the slider or the slider and its catches, so as to enable the rib cap to be moved with the slider, and operated relatively to the outer ends of the ribs or the ferules thereon, essentially as above explained.

No. 29,722.—GEORGE SCRIMSHAW, of Milesburg, Pa.—*Improved Composition for Pavements, &c.*—Patent dated August 21, 1860.—The claim explains the nature of this invention.

Claim.—The mixing of broken stone or cinder, coal ashes, gravel and coal tar, in the pro-

portions substantially as mentioned, for the purpose of forming a composition for pavement, as described and set forth.

No. 29,723.—WILLIAM SHEARER, of Atlanta, Ga.—*Improvement in Pumps*.—Patent dated August 21, 1860.—By taking off the bottom A and unscrewing the journal J, the piston rod H, together with the parts connected therewith, can be slid out of the chamber B¹. Again, when desired, the journal J can be unscrewed, so as to be withdrawn, and then the piston rod H turned half way round so as to cause the piston heads to wear even and true.

The inventor says: I *claim*, first, the combination of the screw piston rod H, openings O, with journal J, and nut plates *b b*, substantially as set forth.

Second I claim the combination of the screw piston rod H, with its piston heads *i i*, packings *j j*, and plates *k k l l*, with chambers B B¹, and water passages *d e*, arranged to operate in relation to each other, as and for the purposes set forth.

No. 29,724.—JAMES S. SMITH, of New York, N. Y.—*Improvement in Military Caps*.—Patent dated August 21, 1860.—The object of this invention is to arrange the ventilating channels and openings in such a manner as to allow a free circulation of the air, and that they exclude the rain.

The inventor says: I *claim*, first, the arrangement of the annular channel *a*, in combination with the tip B, of a cap or hat, constructed and operating substantially as and for the purpose set forth.

Second. The combination, with the annular channel *a*, of a perforated false bottom D, substantially as and for the purpose specified.

Third. The arrangement of the annular flange or lip *h*, in combination with the ordinary ventilator C, constructed and operating substantially as and for the purpose described.

No. 29,725.—WALTER SOMERVILLE, JR., of Mitchell Station, Va.—*Improved Railroad Car Brake*.—Patent dated August 21, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement for compressing air upon cars, in combination with the brakes, for the purpose of operating them, whether applied to one car or to a train of cars, substantially as described.

Second. I also claim the arrangement of the cover Z² for the purpose of excluding dust and cinder, and of admitting pure air into said pump, in combination with the tub Z¹, substantially as described.

No. 29,726 —P. H. STARKE, of Richmond, Va.—*Improvement in Ploughs*.—Patent dated August 21, 1860.—The frame of this plough consists of an upright standard *b*, provided with a curved flange or wing *c c*, and with a recess *r p l m*, in the lower part of its side.

Claim.—The construction and relative arrangement of the wing *c c* and mould board *a g i j k* (fastened together by means of bolt *n*, and hooks *f f*, and slots *h h*,) the plough standard *b t s r*, the point *d g i j k l m*, and the land side *e r l m*, all as shown and described.

No. 29,727.—HENRY D. STOVER, of New York, N. Y.—*Improved Shaping and Moulding Machine*.—Patent dated August 21, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, so constructing and arranging the several parts of my machine that the same arbor and cutter head may be used vertically or horizontally, or any intermediate angle, and be moved to any such position with great celerity, and firmly secured therein to shape the various mouldings or substances with the same head and cutters, essentially in the manner as described.

Second. Combining the laterally adjustable pressure rolls with the feed rolls and cutter head, so that the axes of the former shall lie between planes perpendicular to the bed of the carriage, and passing through the axes of feed rolls and cutter head, substantially as and for the purpose set forth.

Third. The vertically moving carriage U, with its slides C¹, in combination with the slotted plate F¹, arms G¹, and cams F², upon feed roll shaft, arranged and operating substantially as specified.

Fourth. Forming the recesses of the cutters in a cylindrical cutter head, with their beds obliquely or angularly inclined to the axis of the shaft.

Fifth. The longitudinally adjustable guides R¹ upon the table C, when combined with the described cutter head, operating as and for the purpose set forth.

No. 29,728.—HENRY D. STOVER, of New York, N. Y.—*Improved Planing Machine*.—Patent dated August 21, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* constructing and applying an adjustable elastic or flexible wiper K and L, to effectually clean or wipe the finished board or surface of material being planed

after leaving the cutting blades and before reaching the back rigid pressure roll J, for holding down the board and not mar its surface, substantially in the manner and for the purposes set forth.

I also claim the combination of wiper K and L, the front yielding pressure roll I, the cutting cylinder F, and the back adjustable but rigid pressure roll J, for firmly holding down the board front and back of cutter and beautifully finishing the surface, essentially in the manner and for the purposes set forth.

No. 29,729.—JOEL HAYWOOD TATUM, of New York, N. Y.—*Improvement in Candle Wick*. Patent dated August 21, 1860.—The claim and engravings explain the nature of the invention.

Claim.—The plaited wick for candles, composed of five strands, so arranged that the strands on either side of the wick run from both edges towards the centre in an upward direction, or from the centre toward both edges in an upward direction, as described.

No. 29,730.—WILLIAM W. TAYLOR, of South Dartmouth, Mass.—*Improved Tree Protector*.—Patent dated August 21, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* making the tree-protecting trough in two parts, prepared and put together substantially as set forth in the specification.

I also claim the use of the cloth screen, or its equivalent, for the purpose of guiding the insects climbing over the trough, in place of the packing now used as a receptacle for salt, or its equivalent, all in the manner and for the purposes set forth.

I also claim arranging the dome of a tree protector, so as to throw the drip towards the tree and between the trough and the tree, substantially as set forth.

No. 29,731.—THOMAS SEAVILLE TRUSS, of Darlington, England.—*Improvement in the Construction and Joining of Pipes*.—Patent dated August 21, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the making of an expansive or contractile joint, by which pipes, for the transmission of gas, water, steam, or other fluid, are to be secured together by means of a compressing or nut coupling strap, in two or more parts, with packing material upon, between, or around the ends of the pipes embraced by the strap.

I also claim as my invention the making of the junctures of coupling straps, with recesses and corresponding projections or loose blocks.

I also claim as my invention the making of pipes, with flanges at or adjoining their ends, to be used with or operated upon by a compressing or nut coupling strap, with packing material upon, between, or around the same, and embraced by the strap. I wish it, however, to be distinctly understood that I do not claim pipes with flanges at their ends, secured together by bolts, pins, or coulters passing through the same.

No. 29,732.—GREENLEAF L. TURNER, of New York, N. Y.—*Improvement in Railroad Car Springs*.—Patent dated August 21, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the employment or use of India rubber or other similar elastic material, in connection with air chambers between said rubber and suitable metal plates, when said air chambers communicate directly with the external air, either by means of perforations *p*, or by valves *t*, or when said chambers are provided with bearing plates *D* to prevent the eventual filling and permanent occupation of the air chambers by the rubber under compression, substantially as and for the purpose set forth.

I also claim the construction of the plates, with protuberances *l*, or concaves *d j* upon them, and distributed over the faces of the plates at intervals, substantially as shown, for the purpose of graduating the strength or resistance of the springs when they are compressed as set forth.

No. 29,733.—JAMES VAN VALKINBURGH, of Binghamton, N. Y.—*Improved Machine for Cleaning Rice*.—Patent dated August 21, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the employment of the device *E*, when constructed with spiral flanches *f*, which are set tangentially on a hub *g*, which is provided with steep inclines, all in the manner and for the purpose set forth.

Second. The deflecting step *h*, when made conical or concave round its circumference, and without spiral projections or ledges, in combination with a screw *E*, as and for the purposes described.

No. 29,734.—C. L. WAFFLE, of Sharon, Ohio.—*Improvement in Corn Planters*.—Patent dated August 21, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The disk *S*, pin *T*, and notches *a e i*, when these are arranged substantially as

described in relation to other parts, for depositing and covering the grain immediately beneath the periphery of the main wheel, or for scattering the grain before or behind its track as specified.

No. 29,735.—MILLER WARNER, of West Middleburgh, Ohio.—*Improvement in Seed Planters*. Patent dated August 21, 1860.—This invention consists in the arrangement of the different devices.

Claim.—The arrangement of the levers K K¹, rods V V, rake U, delivering slide H, and seed box M, the whole being constructed to operate as described, for the purposes set forth.

No. 29,736.—PICKENS B. WEVER, of Scarborough, Ga.—*Improved Cotton Press*.—Patent dated August 21, 1860.—This invention relates to certain improvements in that class of presses in which a right and left screw is used, in connection with toggles, for applying the pressure to the substance to be pressed.

Claim.—The combination, with the hinged parts k, of the springs n, rods o, pulleys p, and ropes q, as and for the purpose shown and described.

No. 29,737.—LEWIS B. WHITE, of Moscow, N. Y.—*Improvement in the Construction of Hernial Trusses*.—Patent dated August 21, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The connection or combination of the spring S, by means of the hook, immediately with the lever of the truss herein described.

No. 29,738.—LUTHER WHITMAN, of Winthrop, Maine, and EZRA WHITMAN, of Baltimore, Md.—*Improvement in Casting Cylinders for Threshing Machines*.—Patent dated August 21, 1860.—This invention consists in casting the cylinders of threshing machines, with rectangular tapering holes in them, for the reception of the teeth.

Claim.—The method described of casting threshing machine cylinders in a single piece, and having rectangular tapering holes in them for the reception of the threshing teeth, as set forth.

No. 29,739.—J. D. WILLOUGHBY, of Petersburg, Va.—*Improvement in Machines for Forming Grooves in the Necks of Cans, &c.*—Patent dated August 21, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the mouth piece A, the springs B and C, and the pins a a, when the same are so arranged as to form grooves in the necks of cans, jars, and bottles, when the material is plastic, substantially as specified.

No. 29,740.—GILE J. WILLSON and DAVID H. FOX, of Reading, Pa.—*Improvement in Gas Meters*—Patent dated August 21, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim*, first, the application of tube V, of any convenient length, size, shape, or form, and located at any convenient place in or on the meter, with one end open inside of the meter at or about the working water level of a wet gas meter, with the other or outer end opened or closed by a screw or otherwise, at or about the water level of the water.

Second. The application and combination with tube V, and the other general arrangement of a wet gas meter, of a filling tube W, of any convenient size, shape, or form, with the lower end passing below the water level of the meter, and the upper end passing high enough to overcome the pressure of gas in the meter, to prevent an overflow of water, with an open filling tube, also, to admit of water being filled into the meter without turning off the gas.

No. 29,741.—BANCROFT WOODCOCK, of Williamsburg, Pa.—*Improvement in Ploughs*.—Patent dated August 21, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the cutter C, as set forth, in combination with the corresponding fitting part in the face side of the land side L, and the upper part of the land side made sharp, that when it and the cutter are united, they form one continuous cutter, as substantially described, when said parts are combined with the mould board M.

Second. The arrangement of the movable point P, with its sections, as set forth, and the share S, with its upper and lower sections, as stated, and the knob p, on the lower edge of the land side L, for the purpose named, in combination with the point and share, as specified above.

Third. In combination with the above, I also claim the arrangement of the clevis D and circular saw A; the whole being constructed as and for the purpose set forth.

No. 29,742.—CHARLES WORDEN, of Ypsilanti, Mich.—*Improved Apparatus for Regulating the Flow of Water from Cisterns*.—Patent dated August 21, 1860.—C is a circular opening in the partition D, through which the water passes on entering the machine, while the cistern is but partially full. F and G are openings in the inner wall W, through which the water readily passes, falling through the unclosed part of the bottom, marked H, into the cistern below. E is a square piston head, attached to the rod L, and moving freely up and down in the space between the partition D and the bottom S. J is a rim or flange inserted in the orifice C, in the partition D, and extending a small distance below.

Claim.—The combination of the float, piston, and box, with partitions B and W, having openings J G F, and pipes A and K; the whole constructed, arranged, and operated in the manner and for the purpose set forth.

No. 29,743.—JOHN BIRD, of Birmingham, Pa., assignor to BAKEWELL, PEARS & Co., of Pittsburgh, Pa.—*Improved Fastening of Metallic Covers for Glass Vessels*.—Patent dated August 21, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Attaching the metallic hinged cover to lager beer glasses and other vessels made of glass or earthenware, by means of a lug or lugs pressed on the rim of a vessel, having a suitable cavity in it, if there be one lug only, or between them, if there be two lugs, in combination with a hinged cover, having a tenon or pin to fit into said cavity attached to the lower hinge piece; the whole being arranged and constructed and attached substantially as described.

No. 29,744.—HENRY A. CHAPIN, of Springfield, Mass., assignor to WILLIAM L. SCHOENER & Co., of New York, N. Y.—*Improvement in Stop Cocks*.—Patent dated August 21, 1860.—This invention relates to a kind of water stop known as a "compression stop and waste."

Claim.—In combination with the valve B, and its seat and opening in the shell C, the valve G, and its seat and opening F, in the shell A; the several parts being arranged to operate as set forth and described.

No. 29,745.—HENRY DEMMICK, of New York, N. Y., assignor to himself and PETER H. JACKSON, of the same place.—*Improvement in Flasks for Casting Iron Columns*.—Patent dated August 21, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim the flask for casting columns, composed of two cheek pieces *b b*, hinged to the knowl *a*, and provided with the sand cleats *g*¹, as and for the purposes set forth.

I also claim the movable metallic sand flanges *h h*, formed with dovetail bases entering between the ribs cast on the inside faces of the cheeks *b b*, so as to be removable at pleasure, as set forth.

I claim the divided cheek pieces *b b*, and clamps *f f*, fitted in the manner specified, so that the flask can be enlarged by separating said cheek pieces and introducing a bar between said parts, as specified.

No. 29,746.—ISAAC ROGERS, of North Haverstraw, N. Y., assignor to SAMUEL DASKAL, of New York, N. Y.—*Improvement in Deoxydizing Ores*.—Patent dated August 21, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim the revolving cylinder *e*, fitted with the helical or screw-formed divisions 16, to receive the metallic ore in a pulverized state, and to submit the same to heat and constant agitation by the revolution of the cylinder, while the ore is gradually passed from one end of the cylinder to the other by the division 16, as specified; the metallic ore being supplied through the hollow journal 11, or its equivalent.

I also claim the arrangement of the flues 7 7, in the chamber *d*, with the flues 3 and 14, to heat the cylinder *e*, when combined with the dampers 4 and 15, or their equivalents, to regulate the direction of the draft and the consequent heat of the cylinder *e*, as specified.

No. 29,747.—EDWIN F. REYNOLDS, of West Farms, N. Y., assignor to himself and G. E. SHERWOOD, of Morrisania, N. Y.—*Improved Telegraphic Instrument*.—Patent dated August 21, 1860.—The improvements are described by the claim and engravings.

The inventor says: I claim, first, the employment of one and the same type wheel B, when the same has a continuous rotary motion, as described, for the purpose of transmitting and receiving messages; but this I only claim when constructed, operated, and operating as set forth.

Second. The arrangement of the series of cogs *g g*^{*}, on the under side of the type wheel B, in combination with a corresponding series of movable pins *e*, operated by keys E, and with a stop *s*, on the lever I, which carries the armature, constructed and operating substantially as and for the purpose specified.

Third. Arranging a stationary ring *d*, forming the guide for a series of pins *l*, in combination with a hooked cog *g*^{*}, on the under side of the rotary type wheel B, substantially as and for the purpose described.

Fourth. The arrangement of the vibrating lever *l*, and flaring teeth *k*, in combination with the wheel *i*, springs *n*¹, and regulating screws *n*², constructed and operating substantially as and for the purpose set forth.

No. 29,748.—JOHN KELLY, of West Milton, Ohio, assignor to himself and T. COATE, of the same place.—*Improvement in Machines for Picking Mill Stones*.—Patent dated August 21, 1860.—This invention relates to a machine for forming the small grooves between the large furrows of a mill stone, an operation which is generally termed "cracking," and which gives a "tooth" or grinding capacity to the stone.

Claim.—The combination of the right and left hand screw *E*, with the reciprocating carriage *D*, carrying the pick arms *G*, bars *L*, springs *K*, and tappet cylinder *O*, operating in the manner and for the purpose described.

No. 29,749.—JEREMIAH H. STORY, of Cincinnati, Ohio, assignor to CAMERON, STORY & MALONE, of the same place.—*Improved Machine for Dressing Joists*.—Patent dated August 21, 1860.—The pressure rollers *H H*¹, one on each side of the cutters *E E*¹, serve to hold the joists firmly to the carriage. *I* is a vertical circular saw journalled in a carriage *J*, which, by means of a rod *K*, can be drawn to and fro in a horizontal swing frame *L*, capable of vibrating upon a vertical pivot *M*.

Claim.—The combination of the saw *I*, carriage *J*, and pivotted swing frame *L*, constructed, arranged, and operating substantially as and for the purposes set forth.

No. 29,750.—JAMES H. SWAN, of New York, N. Y., assignor to ARAS G. WILLIAMS, of Brooklyn, N. Y.—*Improved Folding Chair*.—Patent dated August 21, 1860.—The object of this invention is to obtain a chair which may be folded within a very small compass and still have a back capable of being inclined more or less at the option of the occupant.

Claim.—The combination of the legs *A A B B*, jointed arms *G*, and the back *F*, attached by joints *a a* to the legs *A*, all being arranged substantially as and for the purpose set forth.

No. 29,751.—W. H. ALLEN, of Brooklyn, N. Y.—*Improvement in Elevators for Store Houses*.—Patent dated August 28, 1860.—The extreme upper levers have on their upper ends friction rollers *g g*, acting against the bottom of the platform bars *B*, upon which the platform rests. The screw threads on each shaft *D* may be made very fine for heavy work, but for all ordinary purposes quite a coarse thread will serve.

Claim.—The arrangement and combination of the two double threaded screw shafts *D D*, sliding blocks *c c*, bars *B*, platform *C*, and guide frame *A*, with the jointed bars *J J*¹, as and for the purpose set forth and described.

No. 29,752.—JAMES ALSOP, of Clinton, Ill.—*Improvement in Seeding Machines*.—Patent dated August 23, 1860.—If designed to sow broadcast, the slides *o* are closed and the boxes *W* may be removed, and the hopper *R* filled with the seed to be sown. As the machine is drawn along, the cylinder *S*, while rotating, sows the seed in a broadcast manner, the cells *f* filling with the seed as they pass underneath the slot *d* in the bottom of the hopper *R*.

The inventor says: *I claim*, first, the arrangement of the wheels *S*¹ *U* with the tubes *X* and boxes *V*, provided with the valves *q*, and actuated through the medium of the arms *r*, levers *t*, weighted arm *Y*, and the pins *w* on the wheels *U*, as and for the purpose set forth.

Second. In combination with the wheels *S*¹ *U* and boxes *V*, the cylinder *S* and hopper *R*, when arranged as shown, to admit of the sowing of the seed either in hills, or drills, or broadcast, as may be desired.

No. 29,753.—E. S. BACON, of Albion, N. Y.—*Improvement in Bee Hives*.—Patent dated August 28, 1860.—The object of this invention is to obtain a hive that will allow the bees to remain in a compact state within the hive and still have access to all parts thereof without materially spreading themselves or becoming detached from a general mass.

The inventor says: *I claim* a bee hive constructed of cylindrical form, when provided with comb frames *E*, constructed substantially as shown, to conform to the interior of the hive, for the purpose specified.

I further claim the flanches *a*, when grooved at their under sides and attached to the base *C*, as and for the purpose specified.

No. 29,754.—EDWARD BADLAM, of Ogdensburgh, N. Y.—*Improvement in Seeding Machines*.—Patent dated August 28, 1860.—*A* is a quadrangular frame supported at its rear end on two wheels *A*¹ *A*¹, which have a ring *a a* of cogged gearing on their outer sides, between which wheels a provision is made to attach a cylinder *B*, that operates as a coverer and

roller for the scattered seed. The side gearing *a a* on the wheels A gives rotary motion to two shafts B¹ B¹, which have cranks on their ends.

Claim.—The combination and arrangement of harrow teeth, operating as described, with the shaking seed hopper G, all receiving their motion from the two driving wheels A¹ A¹, as used for the purposes set forth

No. 29,755.—FREDERICK S. BARNARD, of New York, N. Y.—*Improved Automatic Terrestrial Time Globe.*—Patent dated August 28, 1860.—The object of this invention is to illustrate the position of the globe in relation to the sun in all its variations during the twenty-four hours of a day and during the course of a year.

The inventor says: I *claim*, first, the arrangement, in combination with the clock movement D, of a revolving terrestrial globe A on an inclined axle C, and encircled by a bow F, constructed and operating substantially as and for the purpose set forth.

Second. The arrangement of the indicator H, in combination with the revolving globe A and with the bow F, constructed and operating substantially in the manner and for the purpose specified.

Third. The arrangement of the fixed hand or pointer J on the toothed ring G, in combination with the rotary rings L and M, or their equivalents, constructed and operating substantially as and for the purpose set forth.

No. 29,756.—H. M. BEARCE, of North Auburn, and LEWIS C. PECK, of Lewiston, Me.—*Improved Machine for Cutting and Swaging Shoe Tips.*—Patent dated August 28, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim* the die I, constructed in the manner described, and in combination with plunger K, operated by cam L, gravity or adjustable percussive force, or both, the latter being imparted to the plunger by screw E and helical spring Q, or otherwise, for swaging the tip, essentially in the manner and for the purposes fully set forth.

We also claim the cutter J², stamp K², and die N², constructed and arranged as described, for cutting the blank, when combined with die I, for swaging the tip, essentially as set forth.

We also claim the combination of the tube P², stand Q², and slide bar R², operated by cam or otherwise, to receive and feed the blanks direct from the cutting die to the swaging die, essentially as set forth.

We also claim the rod R and its plate T, guide plate S, and helical spring U, combined with die I, the rod R being operated by percussive force to throw the swaged tip from the die, essentially in the manner and for the purposes fully set forth.

No. 29,757.—DANIEL BISSELL, of Detroit, Mich.—*Improvement in Crimping Machines.*—Patent dated August 28, 1860.—This invention is an improved machine for crimping or shaping the fronts of boots before they are stitched up, in which the leather while wet is stretched over a former of the proper shape, and the former is drawn down between the clamping jaws, smoothing and crimping the leather, and giving it the proper shape.

Claim.—The supplemental jaws E E, with their lugs, as described, in combination with the jaws B B, levers G G, and treadle H, arranged, combined, and operating in the manner set forth.

No. 29,758.—THOMAS BLACK, of Princeville, Ill.—*Improvement in Cultivators.*—Patent dated August 28, 1860.—The object of this invention is to obtain a cultivator for ploughing or operating among plants of various heights without injuring the same, due provision being made against the breaking down of large plants by passing along the implement, and suitable protection being afforded small plants against clods, stones, &c., which may be cast towards them by the action of the shares. It has also for its object the equalizing of the draught so as to insure an equal pull on each beam of the implement and a perfect operation of the same.

Claim.—The arrangement of the elastic traverse bow bar C, adjustable rods *c*, bow bar B, beams A A, double trees K, chain I, pulleys H J J, beam A, guards G G, standards E, and shares D F, all as shown and described for the purpose set forth.

No. 29,759.—THOMAS BOARD, of Ripley, Va.—*Improved Shoe Cleaner.*—Patent dated August 28, 1860.—This invention consists in arranging a rising and falling slide, in combination with two spring side jaws in a suitable frame fastened to the door-step, or to any other convenient place, in such a manner that if a boot or shoe is placed between the spring jaws, and the vertical slide is depressed on the instep and the foot is drawn backwards, the mud adhering to the boot or shoe is cleaned off on the top as well as on the soles and sides.

Claim.—The arrangement of the rising and falling slide C, in combination with the side jaws B B, constructed and operating substantially as and for the purpose set forth.

No. 29,760.—REINHOLD BOEKLEN, of Brooklyn, N. Y.—*Improvement in Hammers*.—Patent dated August 28, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, so magnetizing or applying magnetism in connection with a hammer that it may be capable of picking up tacks or nails, and inserting them in wood or other material, substantially as described.

Second. Coating the whole head of the hammer, so magnetized or rendered magnetic, with the exception of the face and opposite end, with poorly conducting materials, substantially as and for the purpose specified.

No. 29,761.—L. BRADLEY, of New York, N. Y.—*Improvement in Telegraphic Apparatus*.—Patent dated August 28, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination of a helix with a core arranged to pass through its centre and around and in close proximity to its surface, with the poles also in near proximity to each other, for the purpose set forth.

Second. The combination of a magnet, constructed substantially as described, with a keeper arranged parallel to the legs of the magnet, and in close proximity to the periphery of the helix, for the purpose set forth.

Third. The combination of the armature, or its equivalent, for breaking and closing the circuit, with two springs arranged to act on each other in opposite directions, for the purpose set forth.

Fourth. The combination of a sectional helix with a double switch, arranged substantially as described, for the purpose set forth.

Fifth. The combination of a vibrating armature, or its equivalent, in closing and breaking circuits with a sounding board and tension wires, arranged substantially as described, for the purpose set forth.

Sixth. The combination of an electro-magnet, with an armature suspended by its centre between the poles of the magnet, so as to come in contact with both poles at the same time.

No. 29,762.—GEORGE W. BROWN, of Galesburgh, Ill.—*Improvement in Cultivators*.—Patent dated August 28, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, so combining the frame, wheels, and ploughs with the levers L M, as that the driver or operator, from his seat, may turn or cramp said frame, wheels, and ploughs, on the tongue, to cause the ploughs to follow the crooks in the rows of plants, substantially as described.

I also claim so combining the seat and tongue with the frame, and with an axle set in advance of its supports in the wheels, as that the driver or operator in his seat, by shifting his weight, may raise, hold up, and lower the ploughs, substantially as described.

I also claim, in combination with the ploughs, the convex cutters or shields N N, when constructed, arranged, and operating as set forth.

No. 29,763.—THOMAS S. BROWN, of Philadelphia, Pa.—*Improved Oscillating Ships Berths*.—Patent dated August 28, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement of a rock shaft D, cross bars E, and suspension rods H, in combination with a boat berth, for the purpose of neutralizing the motion of a ship, substantially as set forth.

Second. The arrangement of hinged boards 3 4 1 2 U L L, corks 9 10 11 12, and air-tight tubes J, forming a berth and life-boat, substantially as set forth.

No. 29,764.—GEORGE BUCHANAN, of Hickory, Pa.—*Improvement in Self-acting Wagon Brakes*.—Patent dated August 28, 1860.—This invention consists in an arrangement of brake, bar, cords or chains, springs, pulleys, and operating rods, when used in connection with cars, wagons, and carriages.

Claim.—The arrangement of the brake *e*, bar *g*, rods *x* and *m*, strap *Y*, springs *q* and *v*, and cords or chains *d*, when used in combination with cars, wagons, and carriages; the whole being arranged, combined, constructed, and operated, as described and for the purpose set forth.

No. 29,765.—A. H. BURDINE, of Chulahoma, Miss.—*Improvement in Cotton Gins*.—Patent dated August 28, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Cutting away a part of the upper portion of the breast of a cotton saw gin, in the manner and for the purpose described, so that there shall be a horizontal opening across the breast the full width of the saws, and of less depth than the size of a cotton seed, and so that the teeth of the saws shall extend a short distance beyond the upper end of the ribs of the breast and into the horizontal opening, substantially as and for the purposes described.

No. 29,766.—LEWIS S. CHICHESTER, of New York, N. Y.—*Improved Meat and Vegetable Chopper*.—Patent dated August 28, 1860.—The object of this invention is to obtain a simple and economical implement for the purpose of chopping meat and vegetables in a small way for family use, the device being intended for the kitchen, to occupy but little space, and to require but little labor to manipulate it.

The inventor says: I *claim* the combination of the bowl A, of circular or semicircular form, and the radius knife frame D, so applied as to admit of a rising and falling movement and also a lateral one, as and for the purpose set forth.

I further claim, in combination with the bowl A and knife frame D, the plate C, applied to the bowl, and arranged relatively with the knife frame D, to operate as and for the purpose set forth.

No. 29,767.—ALEXANDER M. CHISHOLM, of Antigonish, Nova Scotia.—*Improvement in Sinecal Quadrants*.—Patent dated August 28, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A mathematical mechanical scale, composed of the graduated plane square A B C D E, divided and subdivided into less squares of tenths each way, and having a graduated quadrant E, in one of the four corners, the radius of which quadrant extends to 60 of the subdivisions or sixteenths of the sides of the square, and also provided with an index F, marked as described, and pivotted to the square in the vertex of the angle, agreeing with the quadrant, and otherwise made as shown and described.

No. 29,768.—THEODORE CHRISTIAN, of New York, N. Y.—*Improved Rotary Cutter Head for Planing Machines*.—Patent dated August 28, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination of a rotary cutter and planing iron with an adjusting screw and nut, arranged to pass through the iron, substantially as described, whereby the cutters may be drawn out or thrown in, as required to adjust them to each other.

Second. The combination of a rotary cutter head, a planing iron, and a clamping iron, arranged as described, to hold the iron to the head, and prevent its springing.

Third. The combination of a series of cutter heads and a series of cutters, constructed and arranged on one shaft, substantially as described, so as to abut and form a continuous line of cutters; and also so that the position of the heads and cutters may be changed in relation to each other on the shaft, in order to produce a great variety of perfect compound mouldings with a few varieties of cutters.

Fourth. The combination of a cutter head with a cruciform dividing saw arranged on the same shaft, so that it can be turned, and the position of its arms, in relation to the cutter knives, changed as required, for the purpose as set forth.

No. 29,769.—EDWARD CONWAY, of Dayton, Ohio.—*Improvement in Heating and Cooking Apparatus*.—Patent dated August 28, 1860.—This invention consists in a peculiar construction and arrangement of alcoholic lamps and generators, for cooking and heating purposes.

The inventor says: I *claim*, first, the arrangement of valved compound burners C E e, in the described combination, with a cooking stove A, for the purposes set forth.

Second. The compound burner, composed of a wick t, and circular series of jets u, communicating with the alcohol boiler, as set forth.

No. 29,770.—ARTHUR DE WITZLEBEN, of Washington, D. C.—*Improvement in Holding Doors Open*.—Patent dated August 28, 1860.—The box A is intended to be of metal, and to be cast in two parts, the main box containing the apartment B making one portion, and the bottom H the other. The bottom H is detached and screwed on the machine. The feet m m are cast with the bottom H, and are made sharp pointed, so as to sink into the floor or carpeting deep enough to prevent the machine from sliding.

Claim.—The box A, apartment B, shank C, knob D, spiral spring E, bottom H, feet m m, and plate n, when used for the purposes specified.

No. 29,771.—JULIUS C. DICKEY, of Saratoga Springs, N. Y.—*Improved Gold Washer and Amalgamator*.—Patent dated August 28, 1860.—This invention consists in the employment of a hollow revolving cone, or shell, made with one or more projections on the base and under side of the same, in combination with a stationary cone, made with one or more channels, one below the other, on the base of the same. The revolving cone works on the stationary cone, and the projections work in the channels, for the purpose of washing and amalgamating gold.

Claim.—The projections c, made on the base and under side of the revolving cone E, working in one or more channels made on the base of the stationary cone D, for the purposes set forth.

No. 29,772.—THOMAS S. DISSTON and HENRY DISSTON, of Philadelphia, Pa.—*Improved*

Machine for Setting Saw Teeth.—Patent dated August 28, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim*, first, causing the saw blade to traverse over the anvil by means of the rotating cog wheels S and S¹, the same being rendered adjustable in respect to the platform P by the devices described, or by any other equivalent mechanism, for the purpose specified.

Second. We claim, in combination with the said conical cog wheel, two or more hammers moving simultaneously, and being so arranged and furnished with such adjusting appliances that the heads of the hammer may be adjusted in respect to each other, and to the said conical cog wheels, as and for the purpose set forth.

Third. We claim the platform P, secured to the permanent frame, and rendered adjustable thereon, substantially in the manner and for the purpose set forth.

Fourth. The guide plates *p p*¹, arranged in respect to the platform P, and rendered adjustable in respect to the conical cog wheels, substantially as set forth, for the purpose specified.

Fifth. The combination of the adjustable anvil with the conical cog wheels and the hammer.

No. 29,773.—HUGH THOMAS DOUGLAS, of Zanesville, Ohio.—*Improvement in Sugar Cane Mills.*—Patent dated August 28, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, constructing on the top and bottom plates of a sugar mill V-shaped inclined planes which come between the rollers and prevent the cane from working between the ends of the rollers and the plates, and thereby obstructing the working of the mill, substantially as set forth.

Second. The combination, in a sugar mill, of the inclined projections *r r*, elliptical boxes *g*, with shoulders *l*, and the feed plate S, the whole constructed, arranged, and operating substantially as described, for the purposes set forth.

No. 29,774.—D. E. FENN, of Tallmadge, Ohio.—*Improved Gate.*—Patent dated August 28, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the inclined planes H L, extending across the open space between the posts of the frame A A¹, the gate C, posts K, rod J, arms G, and ropes M N, as shown and described, so that the front end of the gate will rise and fall upon the inclined planes H L, while the rear end of the gate will ride upon the horizontal rod I, and so that by pulling upon either of the ropes the gate will be opened or closed, being moved partly by the force applied, and partly by its own gravity, in descending the inclined planes, all as specified.

No. 29,775.—FREDERICK FIDLER, of Batavia, N. Y.—*Improvement in Stalk and Root Cutters.*—Patent dated August 28, 1860.—This invention relates to certain improvements in that class of stalk and root cutting machines in which knives are attached to the side of a wheel.

The inventor says: I *claim*, first, in connection with the knives E E, the scorers G, for the purpose specified.

Second. The serrated, reciprocating plates *l l*, operated through the medium of the treadle H, link *j*, lever J, and arms K K, for the purpose of feeding the substance to be cut to the cutters.

No. 29,776.—J. F. FINGER, of Marion, S. C.—*Improved Circular Table.*—Patent dated August 28, 1860.—This invention consists in hanging a circular top table, having drawers in it, in such a manner that the top will be firm and steady under ordinary circumstances, and whenever desired, it may, by firmly placing the foot on certain levers, be rotated.

Claim.—A circular pedestal table furnished with a rod G, step bearing G¹, and foot levers E E E E, and otherwise constructed in the manner and for the purposes set forth.

No. 29,777.—F. G. FLOYD and E. A. FLOYD, of Macomb, Ill.—*Improvement in Corn Planters.*—Patent dated August 28, 1860.—This invention is an improved corn planter for opening the furrow, dropping the corn, and covering two rows at the same operation. The machine is provided with adjustable ploughs or shares, which open the furrows for regulating the depth required to plant, and are controlled by the driver.

Claim.—The combination with a seed planting frame, constructed as described, of the seed slide *a*, vibrating arm *c*, receiving its motion from arm *d*, the wheels *g g*¹, and shaft *h*¹, arranged in the manner and for the purpose set forth.

No. 29,778.—LEWIS H. FRENCH, of Philadelphia, Pa.—*Improved Car Register.*—Patent dated August 28, 1860.—This invention consists in combining with a stile gate placed on the

platform of a car, and surrounded by a suitable railing, so that an entrance or exit can only be through the gate, a number of strikers which act upon a spring bar so connected to certain wheel work, pawls, stops, &c., that each passenger entering the car will be registered by an index hand.

Claim.—The combination with the turn stile, arranged substantially as set forth, of the strikers *a*, spring bar *H*, slotted arm *I*, pawl bar *G*¹, with its spring pawl *c*, and ratchet wheel *G*, combined with a suitable registering apparatus, and arranged and operating in the manner and for the purposes set forth.

No. 29,779.—RANSOM GILBERT, of Morrisville, Vt.—*Improved Clothes Dryer*.—Patent dated August 28, 1860.—This invention consists in providing an elastic connection between the hubs when the dryer is expanded, in order to furnish a self-adjustment to admit of the contraction of line which takes place when wet clothing is hung thereon.

Claim.—The arrangement of the India rubber straps *D D*, and pins *f f*, with the hubs *H H*¹, and standard, arms, braces, and cords, as and for the purpose set forth.

No. 29,780.—JOHN GOULDING, of North Wilbraham, Mass.—*Improvement in Cotton Gins*.—Patent dated August 28, 1860.—The object of this invention is to obtain a machine by which cotton may be ginned or separated from its seed, and the burrs also separated from the wool.

The inventor says: I *claim*, first, the concave or apron *O*, in connection with the toothed plates *L* and wheel *C*, said parts being constructed, as shown, for the purpose described.

Second. The combination of the toothed plates *L*, comb wheel *C*, concave apron *O*, stripper *F*, and beater wheel *H*, said parts being constructed as shown, for the purpose set forth.

No. 29,781.—CHARLES A. GREGORY, of Poughkeepsie, N. Y.—*Improved Apparatus for Filling Bottles*.—Patent dated August 28, 1860.—This invention consists in the construction of a machine for filling any number of vessels with a measured quantity of liquid without spilling or wasting.

Claim.—A machine for filling bottles and other vessels, constructed and operating substantially in the manner described, whereby any required number of vessels may simultaneously receive a measured quantity of liquid from a reservoir with rapidity, precision, and safety, as set forth.

No. 29,782.—STUART GWYNN, of New York, N. Y.—*Improvement in Spading Machines*.—Patent dated August 28, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* first, the employment, in combination with the spades, and for operating them, of double cranks, arranged to move in reverse directions, and giving a compound action to the spade or spades, essentially as specified.

Second. Providing the spade stock or holder with a spring stop or stops, so constructed and arranged as to be capable of being thrust away or to one side of the spade in its descent or digging stroke, to avoid striking a stone or other intervening obstacle calculated to injure it, and permitting of the yield or rise of the spade therefrom, substantially as shown and described.

Third. Constructing and arranging the spade stock or holder, as shown and described, with a twist screw or helical groove, or the equivalent thereof, so that the spade, in its reciprocating or longitudinal travel, shall, at a certain point or points thereof, be turned and made to assume different positions relatively to the line of cut, essentially as set forth.

Fourth. Causing the spade, after it has been pushed into its stock or holder by meeting with an obstacle in its descent, to be automatically returned to its proper position for further work, during the retreat of the holder, by means of the same device or pin which, in connection with the helical slot in the stock, serves to turn and alter the position of the blade of the spade relatively to the line of cut, essentially as described.

Fifth. Constructing the spade or spade blade with an articulation joint, for action when in the soil or when freeing itself therefrom, and, during the backward thrust or throw of the spade, to avoid injury or breakage from stones or other like obstacles in the soil.

No. 29,783.—L. W. HARRIS, of Waterville, N. Y.—*Improvement in Presses*.—Patent dated August 28, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the employment of the open follower bars *l l*, in combination with the hinged rack *C C*, attached to the bed, as shown and described, so that the said racks will serve as guides to the follower, and so that they can be readily turned down to a horizontal position away from the press, when not required for operation, all as set forth.

Also, the combination of the pawls *m n*, when connected by jointed arms *o*, with cylinder *e*¹, hinged rack *C*, and open follower bars *l l*, as shown and described, so that one of said pawls will be operated at each movement of either of the levers *E*, and so that the cylinders *e*¹ may be removed, together with the pawls and levers *E*, whenever desired, as set forth.

Also, the arrangement of the axes of the pawls m n , within the circumference of the hollow cylinders e^1 , as and for the purpose shown and described.

No. 29,784.—JAMES HARRISON, of Troy, N. Y.—*Improved Apparatus for Ringing Bells*.—Patent dated August 28, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Distributing the blows of the hammer or clapper of a bell along or around the sound bow or circumference of the bell, substantially as described, by turning the bell, or its clapper or hammer, by the action of the bell ringing mechanism in sounding the bell, substantially as described.

No. 29,785.—DAVID HASKELL, of Georgetown, Mass.—*Improvement in Sewing Machines*.—Patent dated August 28, 1860.—The inventor says: In order that the same machine may be adapted for straight forward flat work, I provide a movable plate F , with a recess b , to fit around the post C , with its opposite side straight, to fit the part A , the plate being formed with a bevelled edge to fit and rest in a half dovetail recess c , in the part A , and having a shoulder d provided for its support in the post A .

Claim.—The arrangement of the isolated upright post C , with the notched movable plate F , in the manner and for the purpose shown and described.

No. 29,786.—SIMEON HEYWOOD, of Claremont, N. H.—*Improvement in Operating Railroad Switches*.—Patent dated August 28, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of a pivotted slotted knee or tumbler, with a traversing bar and stud, for the purpose of operating the switches of railroads substantially as described.

No. 29,787.—P. B. HOLMES, of Cincinnati, Ohio.—*Improvement in Rotary Engines*.—Patent dated August 28, 1860.—The piston head B is of the exact length of the bore of the cylinder, and the collars H are of the same diameter with said bore, and form on the outside, in connection with the casing A , packing chambers I , which are closed by the casing heads K and screws k . The plates E cause the pistons C to close and open gradually in passing the abutment D .

Claim.—The described combination of collars H , heads K , and packing chambers I , constructed, arranged, and operating in connection with the packing d d^1 d^2 , in the manner and for the purpose explained.

No. 29,788.—CHASE B. HORTON, of Elmira, N. Y.—*Improvement in Machines for Hulling and Polishing Rice*.—Patent dated August 28, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, constructing the concaves of hulling machines of flexible steel plates, having a flexible lining, constructed as described, in combination with elastic springs, in the manner and for the purpose specified.

Second. The combination of the hopper b , cylinder B , and screen C , or its equivalent, when so constructed and arranged in relation to each other that the motion of the cylinder shall cause a circulation of the grains in the manner and for the purpose set forth.

No. 29,789.—ENOCH S. HUFF, of Zanesville, Ohio.—*Improvement in Cultivators*.—Patent dated August 28, 1860.—The arms e e^1 are perforated with numerous holes, which pass across a hole in the beam b , and as these arms are shifted by turning them around the first pivot i , they are secured in place by the key k . The arms c c^1 are also pivotted to cross beams h h^1 , which beams are also pivotted to the main beam b . By virtue of the two pivotted connections with the main frame b , the beams c c^1 and ploughs may be shifted into a great variety of positions in relation to the centre beam b .

Claim.—The combination of the segmental arcs e e^1 , plough beams b c c^1 , and pivotted cross beams h h^1 , substantially in the manner and for the purposes set forth.

No. 29,790.—GEORGE HULL, of Port Crane, N. Y.—*Improvement in Cattle Ties*.—Patent dated August 28, 1860.—The snap A is, or may be, lashed to the one end of a rope, while the clasp B is, or may be, secured on the rope at a suitable distance from said end to admit of a holding loop being formed round the head or neck of the animal, and locking the same by the union of the snap with the clasp. The other end of the rope may be permanently, or otherwise, secured to a post or wall.

The inventor says: I *claim* imbedding the spring a , in the body of the snap, by forming the latter with side guards b b , constructed and arranged substantially as shown and described.

Also, constructing the clasp body of curvilinear, or other equivalent form, in direction of its length, and providing its interior with spiral grooves or ribs f , substantially as set forth.

No. 29,791.—SOLOMON HUNT, of Danville, Ind.—*Improved Washing Machine*.—Patent dated August 28, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the tension roller G, weight I, and rollers *b b*, with the endless belts E K, and drums D-D¹, and J J, whereby one weight answers for producing friction or tension on all the belts and upon the clothes, as set forth.

No. 29,792.—GORDIAN K. HYDE, of Brooklyn, N. Y.—*Improvement in Operating Railroad Switches*.—Patent dated August 28, 1860.—This invention is designed for city and other railroads, on which the cars are drawn by animals. Its object is to place the operating of the switches under the complete control of the driver.

Claim.—The combination of the slotted cylinder H, treadle *j*, rod *g*, spring *h*, with the laterally moving slide G, lever *e*, and truck A, as and for the purpose shown and described.

No. 29,793.—W. A. IVES, of New Haven, Ct.—*Improved Auger*.—Patent dated August 28, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the double twist with two cutting horizontal or floor lips, with side cutters *a a*, attached to one of said floor lips only, in the manner and for the purpose substantially as specified.

No. 29,794.—SAMUEL KENNEDY, of Hibbets, Ohio.—*Improved Apparatus for Feeding Sawdust to Furnaces*.—Patent dated August 28, 1860.—This invention is designed to be applied to the furnaces of the boilers of steam saw mills, and to afford an automatic feeding device which will cause the dust to be consumed as fast as it is produced during the sawing operation.

The inventor says: I *claim* the combination of the stepped plunger B, cylinder A, and hopper *f*, with the box D, scatterer D¹, and shaft C E, as and for the purpose shown and described.

I also claim the arrangement of the bearing of the lower end of shaft E, within a stirrup L, below the box D, and upon a screw J, which also connects the stirrup and the frame K, together; all as set forth, for the purpose specified.

No. 29,795.—G. S. KINSEY, of Reading, Pa.—*Improvement in Horse Rakes*.—Patent dated August 28, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the stationary mortised cleaners 4 4, when used for the double purpose as cleaners and tooth guides, as described and set forth.

Second. The combination and arrangement of the hand lever *h*, spring latch 6, semi-circular slotted rack *e*, and connecting bar 8, when constructed and operated as and for the purpose specified.

No. 29,796.—W. M. KNIGHT, of Buffalo, N. Y.—*Improved Sad Iron*.—Patent dated August 28, 1860.—This invention consists in jointing one of the legs to the horizontal or holding part of the handle, and in operating this jointed leg by a supplemental, rotating handle, having a ferule on its end with an oblique slot cut in it in such a manner that the ends of the legs will be distended or made to approach each other, and locked in recesses formed in flats, or detached from the flat at pleasure.

Claim.—The jointed leg B¹, and the slotted, locking handle portion G, with the recesses *a a*, in the body of the iron, arranged substantially as and for the purposes described, represented, and specified.

No. 29,797.—E. D. LADY, of Nashville, Tenn.—*Improvement in Straw Cutters*.—Patent dated August 28, 1860.—This invention consists in providing an ordinary straw cutter frame with an upright movable box, with a door on one side to receive the bundle to be cut, and close under this box passes the horizontal knife and travelling bottom just below it, moved along in the same frame in which the knife is fastened, and this bottom has a slit or hole just under the knife, through which the cut straw or material will fall into the shoe.

Claim.—The perpendicular feeding box D, with its doors F, pin X, standard E, and tongue *e*, for the purpose described, or any substantially the same, as set forth.

No. 29,798.—R. LITTLE, of Middle Branch, Ohio.—*Improved Coffee Roaster*.—Patent dated August 28, 1860.—A represents the shell of the roaster, which is of an oval form, divided at the centre. To the one half of the shell are attached projections *a a*, while to the other half are projections *b b*, so that when the two parts of the shell are placed together, the projections *a a* and *b b* form the journals or bearings upon which the shell A rotates.

Claim.—The combination, with the oval and divided shell A, of the series of endless, reversed, inclined ribs *e e*, arranged and operating as shown and described.

No. 29,799.—SAMUEL MAITLAND, of Fort Wayne, Ind.—*Improvement in Bee Hives*.—

Patent dated August 28, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the swarming pole G, provided with the ball or hub H, and attached to the hive, for the purpose specified.

Second. The queen cells *h*, attached to the hive, substantially as and for the purpose set forth.

Third. The feed drawer D, fitted within the box C, on which the main portion A of the hive rests, and is made to communicate with the part A when desired by the slide E, substantially as described.

No. 29,800.—FREDERICK H. MANNY, of Rockford, Ill.—*Improvement in Harvesters*.—Patent dated August 28, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the hinged cap or bonnet D, and shoe C, in relation to each other and to the mechanism operating the cutter of the harvester, substantially as and for the purpose described.

No. 29,801.—MARTIN H. MANSFIELD, of Ashland, Ohio.—*Improvement in Seeding Machines*.—Patent dated August 28, 1860.—This invention relates to the especial arrangement of the teeth and in making the deflectors of some elastic substance, for the purpose of scattering the seed broadcast.

Claim.—The described special arrangement of the teeth and deflectors G, when these latter are composed of an elastic substance and operating substantially as set forth.

No. 29,802.—ELISHA MATTESON, of Brooklyn, N. Y.—*Improvement in Converting Reciprocating into Rotary Motion*.—Patent dated August 28, 1860.—This invention consists in the construction and operation of the machine.

The inventor says: I *claim*, first, the reciprocating ratchets G and H, in combination with the ratchet wheel E, when the same shall be arranged in conjunction with and operated by the lever B and cam guides I and J, or by means substantially the same and for the purpose specified.

Second. In combination with the same, I claim the lever M, pawl L, rod N, and pins *j f k*, for the purpose set forth.

Third. In combination with the ratchets G and H and ratchet wheel E, I claim the friction wheel O, handle P, and spring Q, arranged and operated for the purpose described.

No. 29,803.—JAMES McLAUGHLIN, of Duncannon, Pa.—*Improvement in Seed Planters*.—Patent dated August 28, 1860.—This invention consists in the arrangement of a seed dropping and distributing plug valve, with a vertical sliding frame and cam; also in the arrangement of the slotted standards of the furrow opener and coverers, in combination with a lever, rod, and latch, for the purpose of adjusting the furrow opener and coverers; and also in the arrangement of double ratchet wheels upon the shaft of the driving wheels, in combination with pawls, cross bars, and lever, for the purpose of stopping the process of planting either during the forward or backward motion of the machine.

The inventor says: I *claim*, first, the arrangement of a seed dropping and distributing plug valve L, with a vertical sliding frame F F and cams E, substantially as and for the purposes set forth.

Second. The arrangement of slotted standards N and R R of the furrow opener M and coverers D¹, in combination with a lever P, rod Q, and latch S, substantially as and for the purposes set forth.

Third. The arrangement of double ratchet wheels V W upon the shaft of the driving wheels in combination with pawls T X, cross bar Y, and lever Z, substantially as and for the purposes set forth.

No. 29,804.—MATTHIAS D. MERRIWETHER, of Denmark, Tenn.—*Improvement in Harrows*.—Patent dated August 28, 1860.—This invention relates to the particular manner of connecting two or more harrows to one slotted and arched transverse beam, whereby the distance of said harrows from each other may be adjusted according to the different widths of the rows or drills, the seeds of which are to be covered.

Claim.—In combination with a slotted transverse arched beam A, two or more adjustable harrows and harrow blocks, when constructed and arranged substantially in the manner and for the purpose described.

No. 29,805.—JOHN MIDDLETON, of New York, N. Y.—*Improved Window Washer*.—Patent dated August 28, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The window washer described, as a new article of manufacture, the same consisting of a brush B, a reservoir of changeable capacity C, on or near the same level as B, the opening D between C and the front of B, and the rod G, or its equivalent, whereby C is made to change its capacity, substantially as and for the purposes set forth.

No. 29,806.—W. H. H. MILLER, of Williamsport, Pa.—*Improvement in Railroad Car Couplings*.—Patent dated August 28, 1860.—The inventor says: The nature and operation of my invention will be more fully understood by supposing that the truck is thrown out of line with the car, when it is evident the knees I, or one of them, will come in contact with one of the levers D, and, by forcing it towards the centre of the car, open the jaws; it is also evident that either truck being thrown from the track will throw the car out of line with the trucks and uncouple the car.

Claim.—The employment of hooked levers D H D H, centred at K K, and the connecting links E E between them on the truck, and the adjustable knee I I on the body of the car, arranged to operate together substantially as described.

No. 29,807.—JAMES R. MILLS, of Bloomfield, Iowa.—*Improvement in Seed Planters*.—Patent dated August 28, 1860.—This invention consists in the relative arrangement of a detachable hopper, slides, seed distributor, square shaft, and lever.

Claim.—The relative arrangement of a detachable hopper D, slides G and N, seed distributor I, square shaft B, and lever L L¹, constructed in the manner and for the purposes set forth.

No. 29,808.—GEORGE RODNEY MOORE, of Pittsburgh, Pa.—*Improved Gauge for Double Seaming Machine*.—Patent dated August 28, 1860.—This gauge is attached to the frame of the double seamer just below the lower roller, and when adjusted to the work, is tightened by a thumb screw.

Claim.—The rotary disk *r*, face of the gauge *m*, also the adjustable arbor *i*, or any other equivalents.

No. 29,809.—ALEXANDER MORTON, of New York, N. Y.—*Improved Machine for Rolling Gold Pens*.—Patent dated August 28, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the connecting of the axes of the rolls C D by means of the couplings *f*, when said rolls are arranged substantially as and for the purpose specified.

Second. The forming of the eccentric portions *b*, on the lower rolls D, in such a way or in such positions, relatively with each other, that the bite of the rolls may act consecutively at different points on the blanks and produce the differential pressure, as set forth.

Third. In connection with the train of rolls C D, the guides or rests E, placed relatively with the rolls, as and for the purpose specified.

No. 29,810.—HENRY G. NELSON, of Lockport, N. Y.—*Improvement in Water Wheels*.—Patent dated August 28, 1860.—A shows the scroll of the wheel, B the water induction passage, and C a central discharge opening; D is the shaft of the wheel, having its lower end stepped at *a*, in a framing E which supports the scroll A; on the shaft D a polygonal hub F is placed and secured thereto by screw bolts *b*; the flanges *c* serve to increase the bearing surface to which the buckets are to be attached and render the point of attachment firm, without increasing the weight of the wheel, only very slightly.

Claim.—The arrangement of the gates I I, shafts H H, and sectors J J, with the shaft D, vent C, and case A, all as shown and described, for the purpose set forth.

No. 29,811.—J. L. NEWTON, of Black Brook, N. Y.—*Improved Quilting Frame*.—Patent dated August 28, 1860.—This invention consists in jointing the arms and bars to which the quilt is attached to the top of two upright standards, in such a manner that the frame may be folded up when not in use, or so that it may be locked rigidly in place in a horizontal position; and it also consists in furnishing the quilting frame with rollers and adjustable arms, arranged in such a manner that it may be extended or contracted.

Claim.—The combination, with standards A A, of the quilting frame, composed of bars B B and B¹ B¹, with their rollers E E and F and G G and H, furnished with straps and hooks and ratchets and pawls, and otherwise constructed and keyed to the standards A A, as and for the purposes set forth.

No. 29,812.—A. A. PATTERSON, of Kingston, Tenn.—*Improvement in Grain Separators*.—Patent dated August 28, 1860.—The end of each shaft *m* of the fans E has a pinion *n* on it, and these pinions gear into a double toothed spur wheel J which is placed on a driving shaft, said wheel having teeth on its outer and inner periphery, and being at one side of the case or box; to the spur wheel J a pulley L is attached, from which motion is communicated to the apron D by a belt *o*.

Claim.—The arrangement, as shown and described, of the double-toothed spur wheel J, pinions *n*, shafts *m*, and fans E E, with the feeding apron D, bar H, eccentric I, and screens F¹ G, all as set forth, for the purpose specified.

No. 29,813.—DAVID PENNOYER, of North East, N. Y.—*Improvement in Car Seats and Couches*.—Patent dated August 28, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination, with each other and with the seat A, back E, and slotted pronged bar C, of the bars *a a*, in the manner and for the purpose shown and described.

Second. The arrangement of the folding boards G, rods F, pivots *h*, curved guides *j*, vertical strips H, adjustable platform E, and cords *k k*, as shown and described, so that by pulling the cords the boards G will fold inward and the platform E will rise to the roof of the car, and by releasing the cords the platform will descend to its place, all as set forth.

No. 29,814.—JOHN G. PERRY, of South Kingston, R. I.—*Improved Sausage Filler*.—Patent dated August 28, 1860.—The operation of this invention is as follows: When the shaft and vanes are turned by the crank J, the vane that is leaving the widest part of the case and approaching the narrowest part, is turned around edgewise by the shape of the plates or sides of the cavity; and as this vane is turned edgewise, it turns the other, which is leaving the narrow part of the cavity, by the spindle which connects them, around, across the cavity, so as to present a broadside forward, and sweep the cavity clear of whatever may be put in, so that when meat is thrown in the hopper it is carried down by the vanes D D, and as they leave the widest part and turn edgewise they press it out of the orifice F through the tube into the cases placed upon it.

Claim.—The combination of the vanes and case, substantially as described and for the purposes set forth.

No. 29,815.—RANSOM S. POTTER, of Chicago, Ill.—*Improvement in Car Couplings*.—Patent dated August 28, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement for coupling cars from the side, by means of two links *k k*, and the projections F F on the draw bar, in combination with the bolts *h h*, and the pins *i i*.

Second. The arrangement for connecting a wrought iron hasp B, to the cast iron draw bar A, by means of the hooks or projections *f*, the shoulders *g*, and the bolt *a*.

Third. The arrangement for inserting the bolt or bar *b*, and holding it in place without nut or screw, by means of the bolt *a*, substantially as set forth and specified.

No. 29,816.—J. E. PRIEST, of St. Louis, Mo.—*Improvement in Printing Presses*.—Patent dated August 28, 1860.—The machine being put in motion, the card is placed upon the platen G, and against the receiver U, which holds it in the proper position until, by the action of the cam N, the platen has been pressed forward against the type so as to make the impression; the cam then commences to recede and the platen to fall away from the type, and, at the same time, the pin H, in the wheel B, strikes the upper end of the lever E, and raises the receiver off the platen, and thus releases the card that it may fall.

Claim.—The use of the stationary cylinder P, when it is arranged and operated with reference to the inkling rollers I I I, and distributing rollers L, in the manner shown and described.

No. 29,817.—MONTGOMERY QUEEN, of Brooklyn, N. Y.—*Improvement in Journal Boxes*.—Patent dated August 28, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination of the self-adjusting key D, with the check plate C, as and for the purpose set forth and described.

Second. The employment of the lip *m*, in combination with the end piece *n*, journal F, and check plate C, as and for the purposes set forth and described.

No. 29,818.—JOSIAH M. READ, of Boston, Mass.—*Improvement in Ovens*.—Patent dated August 28, 1860.—The object of this invention is to produce a portable oven, which can not only be used in connection with an ordinary cooking range or stove, but which can be set in brick work in the ordinary manner when desirable.

Claim.—My improved oven, having the several parts constructed and arranged in relation to each other, and so as to operate in the manner substantially as described.

No. 29,819.—EZRA REID, of Bazetta, Ohio.—*Improvement in Paddle Wheels*.—Patent dated August 28, 1860.—This invention relates to the arrangement of tangential arms and other devices for feathering buckets, that is, causing them to preserve a vertical position during the entire revolution of the shaft.

Claim.—The arrangement of the stationary wheel A, rods C, with their pinions B and D,

the buckets F, and wheels E, in their relation to each other and to the tangential arms H, operating in the manner and for the purposes specified.

No. 29,820.—HORATIO N. RHODES, of Richmond, Vt.—*Improvement in Sliding Switches for Railroads*.—Patent dated August 28, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A solid sliding switch, with rails, or equivalents for rails, for directing a train upon either of two side tracks, as desired, and with grooves affording a safe passage to the single track to a train coming upon one side track when the switch is adjusted for the other, the whole constructed and operated as described.

No. 29,821.—HORATIO N. RHODES, of Richmond, Vt.—*Improved Safety Railroad Switch*.—Patent dated August 28, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The use of a switch upon one side of a railroad track, constructed as described, and which, combined with rails, constructed and arranged as described, will insure a train taking the desired branch, and at the same time, however it is adjusted, will furnish a safe passage to the single track for the train coming on either of the branch tracks.

No. 29,822.—L. P. RICE, of Adrian, Mich.—*Improvement in Slide Valves for Steam Engines*.—Patent dated August 28, 1860.—When the box A is in its place, and the plates B C are adjusted by means of the screw rods c and nuts c¹, the opening f, in the plate C, is right over the aperture b, in the top of the box, and this latter aperture is made long enough, so that in moving the box in a longitudinal direction the steam is always freely admitted to the interior of the box.

Claim.—The employment of a box valve A, that has its bottom elevated in the middle as shown, when said box is arranged between two plates A B; and the whole constructed so as to operate as represented and described for the purpose set forth.

No. 29,823.—A. RODEN, of Talladega, Ga.—*Improvement in Ploughs*.—Patent dated August 28, 1860.—This invention consists of a sliding loop brace, in combination with a wedge, slotted swinging plate, mould board retaining hook, and standard.

Claim.—A sliding loop brace B C M, in combination with a wedge V W, slotted swinging plate L, mould board retaining hook O P N, and standard G; the whole constructed substantially as and for the purposes set forth.

No. 29,824.—HENRY A. ROE, of Madison, Ohio.—*Improvement in Cheese Hoops*.—Patent dated August 28, 1860.—When the plate G is attached some distance from the edge of the end B of the hoop, so as to contract the same, the washers b may be fitted on the bolt F at the inner side of the arm E, so as to compensate for the outward position of the arm E; the more the hoop is contracted, the more will the arm E extend out, or project from the hoop. This varying position of the arm may be fully compensated for by properly adjusting the washers b.

Claim.—The arrangement and combination, in the manner shown and described, of the plate G, eccentric H, and bolt F with the slotted arm E, yoke D, guides c c, and plate A, for the purpose set forth.

No. 29,825.—JOHN A. ROEBLING, of Trenton, N. J.—*Improvement in Trussed Compound Girders*.—Patent dated August 28, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A trussed compound girder, consisting of an iron girder filled in with wood, combined with tension rods, having their strain directly sustained by the wood.

No. 29,826.—ELIPHALET S. SCRIPTURE, of New York, N. Y.—*Improvement in Wrenches*.—Patent dated August 28, 1860.—This invention consists in the use, with a wrench, of a roller hung eccentrically within the sliding jaw of the same.

Claim.—The serrated roller I, hung eccentrically within the movable jaw E, in combination with the spring catch l, arranged and operated in the manner described and for the purpose set forth.

No. 29,827.—J. C. SELLERS, of Woodville, Miss.—*Improvement in Cotton Presses*.—Patent dated August 28, 1860.—This invention consists in the combination of one or two press boxes and two followers with two rack bars and a centre cog wheel, when the followers are connected to said rack bars by means of cam levers, links, and inclined planes.

Claim.—The combination of one or two press boxes A A¹ and two followers B B¹ with two rack bars M m N n and centre cog wheel O, when the followers are connected to said

rack bars by means of cam levers E G H I F J E¹ G¹ H¹ I¹ F¹ J¹, links D C K L D¹ C¹ K¹ L¹, and inclined planes R S R¹ S¹, as and for the purposes described.

No. 29,828.—JAMES SHAW, of Manayunk, Pa.—*Improvement in Gig Mills*.—Patent dated August 28, 1860.—This invention consists in reversing the usual mode of raising the wool, nap, or pile on woven or felted goods. The cloth is worked and the cylinder raised both in same direction.

Claim.—The employment of a card cylinder or cylinders, arranged and operated as described, for the purpose set forth.

No. 29,829.—ANDREW L. SIMPSON, of Durham, N. H.—*Improvement in Working Ship's Sails*.—Patent dated August 28, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the combination and arrangement of devices applied to the yard A and the studding sail boom B, for the purpose of supporting such boom, and enabling it to run out and in, under circumstances and in manner as described, such devices being the hanger, the foot rope, the runner, the ropes K¹ L, and the stop hook and eye, as specified.

I also claim the arrangement of the screw F and the guide arm G with respect to the boom hanger and rolling yard A.

I also claim the arrangement of the topgallant sheet sheave *a* in or on the boom hanger, as specified.

No. 29,830.—HAMILTON E. SMITH, of Philadelphia, Pa.—*Improved Washing Machine*.—Patent dated August 28, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The vibrating box B, having its centre of vibration situated below its centre of gravity, as described, when the momentum of said boxes is arrested by its pins or projections *e* and *e*¹ striking against the springs *d* and *d*¹, or their equivalents, as and for the purpose set forth.

No. 29,831.—T. BRIGGS SMITH, of Marietta, Ohio.—*Improvement in Lamps*.—Patent dated August 28, 1860.—This invention consists in giving to a lamp a burner of peculiar construction, and capable of saving and conducting heat down into the illuminating material so as to melt it and keep it in a state of fusion; also in surrounding the oil chamber of a lamp with a confined stratum of air, to act as a non-conductor of heat and prevent the temperature of said chamber and its contents from being materially lowered by contact with a colder medium.

The inventor says: I *claim* first, the peculiarly constructed burner described, consisting of the wick tube T and cup C, constructed and united in the manner set forth.

Second. The shade S, formed and operating as described.

No. 29,832.—W. H. TENDLER and JOHN F. MOESHLIN, of Cambridge, Mass.—*Improved Sofa Bedstead*.—Patent dated August 28, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The described mode of arranging the mattress frames and applying them together and to the sofa frame, viz: by means of a link or connecting bar C and a post D, arranged at each end of the sofa, and with respect to the parts *a b*, the sofa and its seat, and connected therewith substantially as specified.

No. 29,833.—NEHEMIAH UPHAM, of Norwich, Ct.—*Improved Steam Trap*.—Patent dated August 28, 1860.—This invention is designed to facilitate the escape of the water which accumulates by condensation and remains in steam pipes that are used to warm buildings, or for other purposes.

The inventor says: I *claim* the combination of a valve chamber C, having valve seats *a*, and that has one of its extremities C¹ fixed while the remainder of the chamber is allowed to expand and contract longitudinally, with an adjustable valve stem H, and valves *b*, substantially as shown and described.

I also claim the arrangement, as shown and described, of the movable carriage or plate E, chamber C, valve stem H, and bed plate G, for the purpose set forth.

No. 29,834.—WILLIAM S. WALLACE, of Americus, Georgia.—*Improvement in Brick Machines*.—Patent dated August 28, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the pressing mechanism, consisting of the cams and eccentrics upon the central vertical shaft H, with the lever slides and plungers, in relation to each other, the hoppers, screens, and frame, and operating in the manner and for the purposes described.

No. 29,835.—ABEL WARE, of Athens, Me.—*Improved Surveyor's Instrument*.—Patent dated August 28, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of a single graduated limb, vernier telescope or sights, with substantially the means described for changing the position of the aforesaid parts 90°, all operating together substantially in the manner described.

No. 29,836.—EPHRAIM WELLS, of Auburn, Miss.—*Improvement in Cultivators*.—Patent dated August 28, 1860.—The claim and engravings explain the nature of this invention.

Claim.—So connecting and arranging the sole piece of a plough in regard to the frame, beam, and handles, as that its lower side shall assume an oblique position when the sole is secured to the vertical standard of the plough, for the purpose of retaining the plough in a vertical position when it is passed over the inclined sides of ridges, substantially in the manner and for the purpose described.

No. 29,837.—JAMES WHITE, of Bangor, Me.—*Improved Amalgamator*.—Patent dated August 28, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The employment of a mercury-tight cylinder, provided with conical ends and lifting buckets, with hooks arranged longitudinally upon the inside of the cylinder, as shown and described, so that while the quartz, dirt, and water, are allowed to pass through the machine, the mercury will be hindered, and will be lifted from the bottom to the top of the machine, and then discharged in showers upon and through the ore and other contents of the cylinder, and thus, by amalgamation, effecting the separation of the gold from the quartz, dirt, and water, all as set forth.

No. 29,838.—JOHN THOMAS WILLIAMS, of York, Pa.—*Improvement in Lamps*.—Patent dated August 28, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The employment, in combination with a lamp that is supplied from an elevated reservoir, of a transparent section F, when said section is arranged between the lamp and the oil supply on a line horizontal to the proper oil level of the lamp, so as to facilitate the replenishing of the lamp without extinguishing the flame and without overflow, all as shown and described.

No. 29,839.—D. WOLF and H. WOLF, of Lebanon, Pa.—*Improvement in Corn Planters*.—Patent dated August 28, 1860.—This invention relates to an improved seed distributing device, whereby the corn may be dropped or discharged from the hopper with regularity, or in a uniform manner, and the device rendered capable of being adjusted to suit kernels of different sizes and forms.

Claim.—The arrangement of the conical cap M, flanged, perforated, toothed plate K, bar N, adjustable plate O, tube R, notched share S, shaft Q, axle D, and beam A, all as shown and described, for the purpose set forth.

No. 29,840.—DAVID T. WOODROW, of Cincinnati, Ohio.—*Improvement in Furnaces*.—Patent dated August 28, 1860.—This invention consists in the construction and arrangement of the parts constituting an improved air heating furnace.

Claim.—In combination with an outer casing A, the fire box B, air tube J, air chamber K, and cylindrical chambers or radiators F G, the latter containing the deflector H; the whole being arranged in relation to each other and within the outer casing A, as set forth.

No. 29,841.—W. E. WORMELL, of Germantown, Tenn.—*Improvement in Ploughs*.—Patent dated August 28, 1860.—The object of this invention is to effect a more thorough pulverizing, or working of the soil, than hitherto; and also to obtain a self-sharpening instrument, and one of great durability.

Claim.—The arrangement of the tri-lateral surface a^* , inclined shares C, mould boards A, and standard B, as and for the purpose shown and described.

No. 29,842.—E. H. ANGAMAR, of New Orleans, Louisiana, assignor to himself and TOBIAS MARCUS, of New York, N. Y.—*Improvement in Cane Coverers*.—Patent dated August 28, 1860.—This invention consists in arranging on the two sides of the frame of a plough two mould boards, with adjustable wings for throwing the earth towards the centre line of the plough, and following them by an adjustable scraper to regulate and render equal the depth of earth applied by the covering mould boards.

Claim.—The combination and arrangement of the twin adjustable covering ploughs P P, with the adjustable scraper S, substantially as and for the purpose specified.

No. 29,843.—JOSEPH HARDEY, of Moline, Ill., assignor to O. CHAMBERLAIN and W. H. BABCOCK, of the same place.—*Improvement in Ploughs*.—Patent dated August 28, 1860.—G is a

plough which is secured to a curved metal beam H. The front end of this beam is slotted, and has two saws *k k* passing transversely through it, between which a vertical guide bar I is fitted. This guide bar I is permanently attached to the axle B. To the front end of the beam H the lower end of a rack J is secured, the upper part of said rack passing between the plates *l l*, which are secured to the upper part of the guide bar I and a bar *m* attached to the axle B. Between the plates *l l* there is also placed a roller *n*, against which the back of the rack bears, and there is also between the plates *l l* a geared sector K which meshes into the rack J.

Claim.—The arrangement of the axle B, plough G, beam H, guide bar I, rack J, sector K, standard M, castor wheel F, arbor E, and frame A, all as shown and described, for the purpose set forth.

No. 29,844.—PETER LOUIS, of New York, N. Y., assignor to himself and HARAM WANDEL, of Castleton, N. Y.—*Improved Valve Gear for Steam Engines.*—Patent dated August 28, 1860.—This invention consists principally in the combination with a yoke connected with the valve, or valves, employed for the induction and the cutting off of the steam, and with a rocker deriving motions from the main shaft of the engine, and operating within and upon the said yoke to open the valve, or valves, at the proper time for the induction of steam, of two adjustable tappet pieces fitted to the yoke for the purpose of being operated upon by an arm of the rocker to effect the closing of the valve, or valves, and consequently the cutting off of the steam at such points in the stroke of the piston as may be desirable.

The inventor says: I *claim* the arrangement of the two connected adjustable tappet pieces *I I n n*¹, in connection with the valve yoke C and rocker F G H, substantially as and for the purpose described.

And I also claim, in combination with the above described arrangement of tappet pieces, the spring *j*, applied in connection with the yoke and the rocker, substantially as and for the purpose specified.

No. 29,845.—JACOB W. TRUAX, of Richford, Vt., assignor to himself and O. J. SMITH, of the same place.—*Improved Head Block for Saw Mills.*—Patent dated August 28, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The toothed segment K, and arm L, provided with the wheels H and G, bar I, provided with the swinging or adjustable pendant J, the wheels H G being attached permanently to the shaft F, and the segment fitted loosely thereon, substantially as and for the purpose set forth.

No. 29,846.—LEWIS WHITEHEAD and SAMUEL P. KITTLE, of New York, N. Y., assignors to SAMUEL P. KITTLE, of the same place.—*Improved Spring Mattress.*—Patent dated August 28, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim*, first, the combination of the brace 2, constructed as described, with the spring 1, substantially as and for the purpose set forth.

Second. The combination, with the slats 5, (upon which the springs are secured,) of the bevelled intermediate block 6, and the hinges by which the said blocks and slats are connected, substantially as and for the purpose set forth.

Third. The combination of the head blocks or raising blocks *g g*, with the slats to which they are attached, and with the intermediate blocks which connect the lower one of these slats to the next one below it, when the head pieces *g g* are so bevelled as to underlie this intermediate block and thus relieve the hinge, as described and specified.

No. 29,847.—SYLVENUS WALKER, of Boston, Mass., assignor to himself and S. S. HEMENWAY, of the same place.—*Improved Trace Fastener.*—Patent dated August 28, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Covering and protecting the projecting head D of the whiffletree on the outside of the tug, by shield piece C, in the manner and for the purpose set forth.

No. 29,848.—C. WILLIAMS, of Weston, Mo., assignor to himself and J. F. DEFFENBACHER, of the same place.—*Improvement in Bee Hives.*—Patent dated August 28, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Constructing the feed apparatus so that a uniform quantity of food will always flow into the trough, said trough having a perforated cover for the bees to feed through, in the manner and for the purposes set forth.

No. 29,849.—G. W. N. YOST, of Yellow Springs, Ohio, assignor to himself and JOHN F. WATSON, of Edwards Depot, Miss.—*Improvement in Cultivators.*—Patent dated August 28, 1860.—The object of this invention is to save labor during the busy part of the year, and also to modify the machine so as to be able to adapt it to barring off and scraping both sides

of the row at once, also to hilling both sides of the row at the same time, with two furrows on each side, and cultivating the whole middle of the row at once.

Claim.—The arrangement and combination of the two beams A, cross braces K and L, movable shares D, and wheels G; the whole being constructed as and for the purposes described.

No. 29,850.—HENRY N. BAKER, of Binghamton, N. Y.—*Improved Electro-Magnetic Apparatus.*—Patent dated September 4, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the employment in a magneto-electric machine of a number of helices in each wheel, or circular series, proportioned to the number of magnetic poles in each circular series of magnets, as described, for the purpose specified.

Second. The arrangement of helices of two or more wheels, in spiral relation to each other, as and for the purpose set forth.

Third. The construction of the helices with thin flat cores, arranged radially to the centre of motion, substantially as and for the purpose specified.

Fourth. The intensity regulator, consisting of the wheel F, plates G G, coupling straps m m, and screws j j, or their equivalents, combined, substantially as described.

Fifth. Arranging the terminal wires of the helices to pass through the hollow rotary main shaft, on their way to the intensity regulator and pole changer, as described.

No. 29,851.—JONATHAN BALL, of Elmira, N. Y.—*Improvement in the Mode of Preparing Wood for Umbrella Sticks.*—Patent dated September 4, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the process of curing, consisting of the operations of curing, drying, digesting in hot water, drying again, soaking in hot oil, and drying in hot air, performed in the order specified.

Second. I *claim*, in combination with the described process of curing, the dying of the wood simultaneously with, or by the same operation as the removal of the sap, substantially as described.

No. 29,852.—IRA S. BARBER, of New York, N. Y.—*Improvement in Machines for Turning Ovals.*—Patent dated September 4, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, supporting the cutter shafts in radial self-adjusting arms in combination with the pattern, arranged substantially as shown; and this I *claim* whether the driving pulley have the same axis with the said arms or not.

Second. I *claim* the movable and adjustable pattern guides, whereby various sizes, shapes, and widths can be cut from one and the same pattern.

No. 29,853.—W. H. BARBER, of Wolcottsville, Ct.—*Improvement in Seed Planters.*—Patent dated September 4, 1860.—The motion from the driving axle is transmitted to the seed slide E by means of the teeth a b of the ratchet wheels F G, which are rigidly attached to the axle C, and which, in rotating with the said axle, actuate the rock shaft c, from which an arm d connects with the seed slide.

Claim.—The arrangement of the wheel B, ratchets F G, clicks f g, shaft C, rock shaft c, spring e, hopper H, spring h, slide E, and shares I J, as and for the purpose shown and described.

No. 29,854.—THOMAS BEACH, of Freeport, Pa.—*Improvement in Steam Hammers.*—Patent dated September 4, 1860.—The claim and engravings explain the nature of this invention.

Claim.—So constructing and arranging the piston rod and hammer shaft of steam and atmospheric hammers as that the hammer shaft shall pass into or through the piston rod made hollow to receive it, in order that the length of the hammer shaft, below the cylinder, may thereby be capable of adjustment, without interfering with the length of the stroke of the piston, substantially in the manner and for the purposes set forth.

No. 29,855.—BENJAMIN BOGUE, of Trenton, Iowa.—*Improvement in Horse Power.*—Patent dated September 4, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the frame A and the wheel B, the internal lead bars a a and the external lead and division bars d and e, substantially in the manner specified, for the purpose of applying horse power internally and externally to the wheel, as is set forth.

No. 29,856.—REUBEN BRADY, of New York, N. Y.—*Improvement in Tuck and Plait Folders.*—Patent dated September 4, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the construction of the confining plate H, when hinged to the lower plate A, for the purpose and in the manner shown and described

I also claim the ledge i on the plate F, when arranged to operate as and for the purpose set forth.

I also claim the arrangement of the plate A with the plates F H, in the manner shown and described, whereby the said plate A serves to furnish an even bearing for the tuck being sewed, and also serves as a guide to the tuck last sewed, all as set forth.

No. 29,857.—CHARLES D. BREWER, of Lewisburgh, Pa.—*Improvement in Machines for Dressing Mill Stones*.—Patent dated September 4, 1860.—This invention consists in the arrangement and construction of certain parts of the machine, whereby the force of the pick is varied, while the feed may be either kept the same or varied at pleasure.

Claim.—The use of the plate N, when the same is made adjustable on the pick carrier D, by means of the slot u, and screw bolt V, or their equivalents, as described, and to operate in combination with the adjustable pawl I, and lever arm l, to enable the operator to vary the force of the pick without varying the feed of the carriage B, as set forth and described.

No. 29,858.—T. E. C. BRINLEY, of Louisville, Ky.—*Improvement in Ploughs*.—Patent dated September 4, 1860.—This invention consists in a novel way of attaching the standard of the plough to the mould board and land side, whereby a very firm and durable attachment is obtained.

Claim.—The arrangement, on the standard D and beam A, of the ledges a b and shoulder h, to admit of the attaching of the standard to the land side, mould board, and beam, as shown, in connection with the brace or rod E, applied substantially as and for the purpose set forth.

No. 29,859.—THOMAS BYRNE, of Baton Rouge, La.—*Improvement in the Preparation of Flour*.—Patent dated September 4, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The bringing of flour of wheat and other grains in contact with carbonic acid gas, artificially manufactured.

No. 29,860.—THOMAS BYRNE, of Baton Rouge, La.—*Improvement in the Mode of Applying Sulphurous Acid to Cane Juices*.—Patent dated September 4, 1860.—The claim explains the nature of this invention.

Claim.—A method by which I treat cane juices with sulphurous acid gas and lime, or sulphurous acid gas and either of the earths, viz., baryta, magnesia, or strontia, so that no sulphite of lime or sulphite of any of the above mentioned bases shall be formed in said cane juices, as set forth.

No. 29,861.—SHARON CASE, of Lumpkin, Ga.—*Improved Machine for Thinning Boards*.—Patent dated September 4, 1860.—This invention consists in combining, with a guide and gauge box, a plane stock carrying a curved plane iron, and a feed roller for carrying the stuff up to the cutter, and an adjustable board by which the stuff may be nicely gauged, so as to be cut as thin as desirable.

Claim.—The combination, with a box D having an adjustable bottom operated by set screws a a a a, of the feed roller G¹, arranged and made to operate as set forth, plane A J, and pressure roller G, the whole being combined and arranged substantially as and for the purposes set forth

No. 29,862.—CHARLES T. CHESTER, of New York, N. Y.—*Improvement in Electro-Magnets*.—Patent dated September 4, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, in combination with cores confined so as to prevent the action of the current through a surrounding helix from imparting motion to them, helices wound on spools of hard rubber or other suitable material surrounding the cores, and so arranged that the cores may be removed from them, when requisite, substantially for the purposes set forth.

Second. I claim holding, moving, and adjusting the cores by means of the screw and spring, substantially as described.

Third. Coupling and supporting the helical spools by the double rings, substantially as described.

No. 29,863.—LEWIS S. CHICHESTER, of New York, N. Y.—*Improved Sad Iron*.—Patent dated September 4, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A smoothing iron having a hollow spiral self-ventilating handle, and the edges of its rubbing surface provided with a groove, and otherwise constructed as shown and described.

No. 29,864.—J. MASLIN COOPER, of Pittsburgh, Pa.—*Improvement in Revolving Fire Arms.*—Patent dated September 4, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the use of a locking bolt, such as described, operated by the trigger spring, and trigger working on a collar on the trigger around the trigger pin, so as to prevent its action being interfered with by the pressure of the sides of the lock frame.

The use of a projection at the front end of the trigger, projecting through the lock frame, and pressing against the circumference of the rotating breech, in combination with suitable recesses in the circumference of the rotating cylinder, whereby when the trigger is not drawn back, and the parts are at rest, the cylinder will be secured from rotation in such a position that the end of the hammer will be situated between two of the nipples, and not upon or in front of any of them, thus avoiding, in a great measure, the danger of a premature or accidental discharge.

Also the arrangement of the trigger, hammer, and vibrating tooth, constructed as described, for the purposes described.

No. 29,865.—A. B. CRAWFORD, of Piqua, Ohio.—*Improvement in Threshing Machines.*—Patent dated September 4, 1860.—The belt H is formed of canvas, or any belting material, as a bottom, and plays around pulleys like any ordinary endless belt, the cross strips containing the cells are formed by taking strips of board one and a half inch thick by three inches wide.

Claim.—The cellular belt H, as arranged, in combination with the vibrating belt I, with the projections or fingers *f*, teeth *g*, and pins *h*, and arms *I*¹, and stacker S, all operating as set forth and for the purposes described.

No. 29,866.—G. W. EFNER and SAMUEL A. SPERRY, of Ann Arbor, Mich.—*Improvement in Carriages.*—Patent dated September 4, 1860.—This invention consists in providing, in connection with hollow tubular axles, a new and useful carriage spring, and also, in connection with such, a new and useful mode of attaching and detaching the wheels of vehicles.

The inventors say: We *claim* the hollow axle B, in combination with the double spring catch D, and the manner of operating the same by turning the spring within the elliptical opening at the outer end of the axle, as a mode of attaching and detaching the wheel.

We also claim the hollow axle B, in combination with spiral spring K, spring lever I, and thorough brace M, operating together in the manner described, as a carriage spring.

No. 29,867.—HORACE L. EMERY, of Albany, N. Y.—*Improvement in Cotton Gins.*—Patent dated September 4, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the employment or use, within the saw chamber A of a cotton gin, of a rotating cylinder or shaft C, provided with spikes or teeth *c*, for the purpose specified, substantially as set forth.

I also claim the arrangement, as shown, of the cylinder or shaft C, within the saw chamber A, to wit: providing the shaft with journals *a*, which are fitted to openings *b*, of sufficient diameter to admit of a necessary degree of lateral play or movement of the shaft, as and for the purpose specified.

I further claim, in connection with the journal opening *b*, the disks or circular plates D, attached to the shaft, for the purpose set forth.

No. 29,868.—DANIEL FASIG, of Rowsburg, Ohio.—*Improved Feeder for Straw Cutters.*—Patent dated September 4, 1860.—This invention consists in operating a rake by a novel arrangement, so as to give it an advancing movement up to the cutters at each revolution of the crank shaft that operates the knife—said movement of the rake being regulated at pleasure to cut straw longer or shorter.

Claim.—The combination, with shaft F, of the flanges *c c*, tooth *e*, rack handle H, and rake I, arranged and made to operate in the manner and for the purpose set forth.

No. 29,869.—D. FELLENBAUM, of Lancaster, Pa.—*Improvement in Balancing Mill Stones.*—Patent dated September 4, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Applying the weight E to the side of the revolving stone or runner A, and in or about in a horizontal plane with its point of suspension, by means of a metal strap or band D, or other suitable device, for the purpose specified.

No. 29,870.—H. E. FICKETT, of Glenn's Falls, N. Y.—*Improved Clothes Dryer.*—Patent dated September 4, 1860.—This invention consists in the construction and operation of a clothes dryer.

Claim.—The dryer, constructed substantially as described, in combination with the stand-

ard F, and ribbed socket G, the whole arranged and operated as described, and for the purpose specified.

No. 29,871.—LUTHER FOGG, of Boston, Mass.—*Improvement in Skates*.—Patent dated September 4, 1860.—This invention consists in constructing a skate with a broad oscillating runner, hinged to the stock in such a manner as to admit of its lying flat on the ice, whether the foot is canted upon an angle or otherwise; also, with extension plates attached to the straps, by which the skates can be readily fitted to feet of different sizes.

The inventor says: I *claim*, first, the oscillating runner, being hinged to the stands projecting from the stock, substantially in the manner and for the purpose described.

Second. I claim the extension plate connected to the strap, substantially in the manner and for the purpose set forth.

No. 29,872.—ALBERT FULLER, of Cincinnati, Ohio.—*Improvement in Hydrants*.—Patent dated September 4, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the yielding valve H, and waste valve M, when combined, arranged, and connected substantially as set forth, so as to permit the waste valve to operate alternately with the main valve or remain inactive, at the option of the operator.

Second. The described combination of pipe or barrel E, screw nozzle F, guides e, and casing D; the said parts being constructed, arranged, and operated as set forth, so that the hydrant may be removed bodily by unscrewing from above, and again replaced, without disturbance of the ground, and without undue exposure of its base.

No. 29,873.—M. A. FURBISH and GEORGE CROMPTON, of Worcester, Mass.—*Improvement in Power Looms*.—Patent dated September 4, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim* connecting the two hand levers of the belt shipper, one on each side of the frame, by combining therewith the sliding rod connected with one, so as to move therewith, and provided with shoulders on each side of the spring handle, and with a bevel or inclined plane, substantially as described, so as to enable the operator to stop or start the loom by one motion from either side of the frame.

We also claim the single lever under the breast beam, and passing through and working in a mortise in the side frame, substantially as described, in combination with the trip lever and spring lever of the shipper, substantially as described and for the purpose set forth.

And, finally, we claim giving support to the warp beam by means of one or more intermediate wheel or wheels, or equivalent thereof, in combination with a standard or standards, fitted thereto, substantially as described.

No. 29,874.—PERRY G. GARDINER, of New York, N. Y.—*Improvement in Cotton Presses*.—Patent dated September 4, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement and combination of toggle joints and pawls, acting alternately on teeth, or their equivalent, provided on a rod connected to the movable platen of a cotton press, and operating so as to move and supply alternately said rod and platen at stated intervals, whether the motion of the platen be upwards or downwards, in the manner and for the purpose substantially as described.

Second. I claim the guide plate M, provided with slots or guides, and operating the ends of the toggle joints and of the pawls, in the manner and for the purposes substantially as specified.

Third. I claim the lever V, in combination with the fork piece X, operated by the lever Z, acting on eccentric grooves Y, attached to a wheel W, in the manner and for the purpose specified.

Fourth. I claim the arrangement of the upper part B¹ of the cotton box, with its movable sides and ends, for the purpose and in the manner substantially as described.

Fifth. I claim the combination of double toggle joints, working in reverse motion to each other, on teeth or notches attached to a rod fast to the movable platen, in combination with a guiding plate operated by a grooved cam wheel, and in combination with pawls; the whole being arranged and combined to work together, in the manner and for the purpose substantially as set forth and described.

No. 29,875.—RICHARD J. GATLING, of Indianapolis, Ind.—*Improvement in Hemp Brakes*.—Patent dated September 4, 1860.—This invention consists in providing a frame to which is attached a suitable arrangement of shafts, levers, connecting rods, and beaters, whereby hemp may be broken in a better manner than at present.

The inventor says: I *claim*, first, the oscillating beaters B and C, (as shown in Figs. 1 and 2,) when constructed, arranged, and operating in the manner and for the purpose substantially as specified.

Second. I claim the cam D, cam yoke F, curved lever G, connecting rod H, crank S, rock shaft K, lever I, and connecting rods L and R, treadle P, and cord attached thereto, or their equivalents, when arranged and constructed, substantially in the manner and for the purpose set forth.

No. 29,876.—JAMES R. GILBERT, of Starkville, and STEPHEN R. WESTON, of Dawson, Ga.—*Improvement in Cultivators*.—Patent dated September 4, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the handles, beams, hinged standards, and hinged curved and notched braces, by which we are enabled to change the plough from a double beam adjustable cultivator plough to two single beam ploughs, substantially in the manner described.

No. 29,877.—W. W. GOLSAN, of Autaugaville, Ala.—*Improvement in Cotton Cultivators*.—Patent dated September 4, 1860.—A rectangular frame, composed of the parallel longitudinal beams B B, and the transverse end beams C D, forms the main portion of the frame work of this implement. The ends of the hindmost transverse beam D of said frame project a short distance beyond the side beams B B thereof, and those ends are securely combined with the central portion of the uprights F F.

Claim.—The arrangement of the cultivator point L, and the central driving wheel A, with the crank shafts *a a*, the laterally acting hose *h h*, and the uprights F F, substantially in the manner and for the purpose set forth.

No. 29,878.—W. W. GOLSAN, of Autaugaville, Ala.—*Improvement in Seed Planters*.—Patent dated September 4, 1860.—On the the axle *c* there is a belt G, which passes around a drum on the shaft *g*. This shaft revolves in boxes, secured to the bottom of the hopper E. On the centre of this shaft there is an agitating wheel H, with blades; this wheel passes through the slide *d* into the hopper, equi-distant, and, at the action of the axle, revolves, and the blades stir up and force the manure from the hopper through the slots in the hopper and slide, in which the wheel revolves, into the furrow in the rear of the seed planted.

Claim.—The combination of the cam wheel *c*, agitating wheel H, spring *e*, and slide *d*; the whole being constructed and arranged in the manner and for the purpose described.

No. 29,879.—ALEXANDER J. GRAHAM, of Portland, Oregon.—*Improvement in Locomotive Engines*.—Patent dated September 4, 1860.—When the axle G is rotated, the foot pieces F, on each side of the frame A, receive a reciprocating motion in opposite directions, so that one of the foot pieces on each side of the machine serves to propel the same, while the other two foot pieces are drawn forward ready for a fresh hold.

The inventor says: I *claim* the arrangement of the yielding feet F and slides E E, in combination with the double cranks *j j*¹, rods *k k*¹, and central shaft G, as and for the purpose shown and described.

I also claim the employment of the double bevelled collar *m*, in combination with the shaft G and sliding pulleys H H¹, as and for the purpose shown and described.

No. 29,880.—JOHN GREACEN, JR., of New York, N. Y.—*Improved Device for Discharging the Smoke, Cinders, &c., from Locomotive Engines*.—Patent dated September 4, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination, with the smoke pipes or tubes, arranged to convey the smoke from the rear to the front of the train, of reversible funnel connections, constructed and operating substantially as and for the purposes set forth.

No. 29,881.—T. H. GREEN, of Fond du Lac, Wis.—*Improvement in Grain Elevators*.—Patent dated September 4, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the employment of the horizontally revolving distributing spout G, in combination with the bins J, when the axis of rotation of said spout is arranged beneath the discharging mouth of the elevator, so that the grain may be conducted to any of the bins that are within the radius of the circle described by the outer end of the spout G, all as shown and described.

I also claim the combination of the revolving spout G, shaft F, and index lever H, with the elevating device B, substantially as shown and described.

No. 29,882.—JOSEPH HARRIS, JR., of Roxbury, Mass.—*Improvement in City Railroad Cars*.—Patent dated September 4, 1860.—The doors of this car are controlled by the driver, by means of foot straps extending from the door, through the car, and under his foot. The greater portion of the platforms are enclosed, as represented by letters *c c*.

Claim.—The arrangement and construction of a car, when made in the manner and for the purposes described.

No. 29,883.—JOHN M. HATHAWAY, of New York, N. Y.—*Improvement in Augers.*—Patent dated September 4, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the eccentrically adjustable cutter, sliding on and held by dovetail groove and tenon, as described.

Second. I claim, in combination therewith, giving a solid shaft or centre to the auger, thus affording solid and sufficient metal upon which to form said tenon.

Third. I claim extending the spiral upon such solid shaft the entire length, and making the edge of said spirals sharp for the reason given.

Fourth. I claim, in combination, making the centre screw or worm removable, as described, for the reason given.

No. 29,884.—HOMER HECOX, of Rutland, Vt.—*Improvement in Sap Conductors.*—Patent dated September 4, 1860.—The claim and engravings explain the nature of this invention.

Claim.—As an improved article of manufacture, a metallic sap conducting tube, when made tapering in form and provided with a centrally placed nose *b*, and otherwise made as shown and described.

No. 29,885.—MARK W. HOUSE, of Cleveland, Ohio.—*Improvement in Harrows.*—Patent dated September 4, 1860.—The rim portion *g* of each section of this improved harrow overlaps the adjoining section of the same a sufficient distance to enable each tooth *d* to be combined with two of said sections by means of a clamp *f* and a wedge or key *h*.

Claim.—Constructing a harrow of the respective parts represented in the accompanying drawings, when the said parts are combined with each other substantially in the manner set forth.

No. 29,886.—MICHAEL HAUSMAN, of Huntington, Ind.—*Improvement in Corn Shellers.*—Patent dated September 4, 1860.—This invention consists of two blades or jaws of iron or other suitable metal, united at one extremity, so as to be parallel, or nearly so, by a hinge joint, through which is passed an axis projecting both ways so as to serve as a handle; the other ends of these jaws or blades being spread out in a broad paddle-like shape, having a number of thin shells or flanges projecting inwardly from them at right angles, their directions being oblique to the length of the blades, and their edges being bevelled off and hollowed out.

Claim.—The jaws 1 and 2, the hinge joint by which they are united, the handle 3, the broad extremities of the jaws or blades, with the flange projections 4 5 6 7, and the corresponding flanges on the opposite blade, the spring 10, and the separating studs 9; the whole being constructed and arranged in the manner before described, and operated and operating as set forth and for the purpose stated.

No. 29,887.—SIDNEY HUDSON, of Milford, Mich.—*Improvement in Self-Acting Waste Gates for Mill Dams.*—Patent dated September 4, 1860.—This invention has for its object the preventing of the washing away of mill dams by freshets, and by such means as will be automatic in its operation.

Claim.—The combination of the pivotted gates B C, of the adjustable counterpiece G, bent lever F, rod E, and connecting link D, when the parts are arranged and constructed to operate together as and for the purpose shown and described.

No. 29,888.—JAMES J. JOHNSTON, of Alleghany, Pa.—*Improved Device for Teaching Children.*—Patent dated September 4, 1860.—This invention consists in an arrangement of a letter board, letter case, copy chamber, and hexagonal blocks, with figures and the letters of the alphabet impressed on them.

Claim.—The arrangement of the copy chamber *b*, letter board *c*, letter case *a*, and hexagonal blocks, with the letters of the alphabet, punctuation points, and figures impressed upon them; the whole being arranged and constructed in the manner described, and for the purpose set forth.

No. 29,889.—WILLIAM S. KIMBALL, of Rochester, N. Y.—*Improvement in Wine Presses.*—Patent dated September 4, 1860.—This invention consists in passing the fruit between two rollers, by means of a perforated and elastic or compressible apron, the distance of the rollers apart, and the compressibility of the apron, being so adjusted that while all juice of the fruit will be expressed and forced through the perforations in the apron, none of the seeds or stems will be crushed or expressed, they being much firmer or harder than the fruit.

The inventor says: I *claim*, first, the use of the perforated elastic apron A, in combination with the rollers $R^1 R^2 R^3$, in the manner and for the purpose substantially as described.

Second. I claim the use of the corded or enlarged edges of the apron A, in combination with the grooved rollers as shown in Fig. 4; the whole being arranged and operating in the manner and for the purpose substantially as set forth.

No. 29,890.—J. W. KNAPP, of Chester, N. Y.—*Improved Window Shutter and Stand*.—Patent dated September 4, 1860.—This invention consists in the employment of two upright posts of sufficient height, with spikes projecting from the inside of each, and placed near the top of the posts, one of which posts is fixed and braced in a stationary state, and the other is jointed or hinged to a sliding block, by which the posts may be adjusted at any desirable distance apart for shutters of different lengths or widths, and fixed rigidly by a set screw, while the jointed post will be fixed, after receiving the blind, by an extension prop and rack.

Claim.—The two posts, with thin spikes $b b^1$, one post being stationary and the other post jointed to a sliding piece E, and prepared by an adjustable jointed piece G; the whole constructed substantially as described and considered in combination, for the purposes set forth.

No. 29,891.—JULIUS KOCH, of South Adams, Mass.—*Improved Apparatus for Trimming Paper*.—Patent dated September 4, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the box E, provided with a flap a , with the adjustable rotating cutting board H, and with or without the gauge G, substantially as and for the purpose set forth.

No. 29,892.—D. R. LIGHTNER, of Bucyrus, Ohio.—*Improved Spring Bedstead*.—Patent dated September 4, 1860.—This invention consists in having a system of slats, and an elevating rack unconnected with the frame work of the bedstead, supported by two springs, which are also unconnected with the bedstead, except by a support across the middle.

Claim.—The arrangement of springs C, batten E, side rail F, and elevating rack, the whole resting on the plank A across the middle of the bedstead.

No. 29,893.—DANIEL LOMBARD, of Boston, Mass.—*Improvement in Machines for Polishing Rice*.—Patent dated September 4, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the surfaces $a b$ and c with stirrers f , when all of these are covered with buckskin, or other equivalent yielding material, and are of the form and relative arrangement described, operating together, as specified, to polish the grains of rice.

No. 29,894.—DANIEL LOMBARD, of Boston, Mass.—*Improvement in Machines for Scouring Rice*.—Patent dated September 4, 1860.—The object of this invention is the removal of the colored skin or inner cuticle from the grains after the shell or husk has been separated therefrom.

Claim.—The described arrangement and combination of stirrers and stationary surfaces, of the form described, acting together, in the specified manner.

No. 29,895.—HENRY MARCELLUS, of Amsterdam, N. Y.—*Improvement in Mowing Machines*.—Patent dated September 4, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination of levers F and H, or their equivalents, a castor, or its equivalent, and a double hinged main frame, for the purpose of raising, lowering, and holding up both ends of the finger beam, substantially as set forth.

Second. In a mowing machine, whose main frame and finger beam are rigidly connected, and are free to vibrate up and down transversely to and parallel with the path of the machine, supporting the driver's seat on the axle of the driving wheel in such manner that it will be unaffected by the lateral vibratory movements of the main frame or the turning of the main axle, substantially as described.

No. 29,896.—GEORGE B. MARKHAM, of Mead's Mills, Mich.—*Improvement in Self-Acting Flood Gates*.—Patent dated September 4, 1860.—This invention consists in arranging the gate to swing on a bar, which is adjustable in two flanges, so that the discharge opening, which is formed as the water rises beyond a certain height, can be made larger or smaller, as may be desired.

Claim.—The arrangement of the flanges b and adjustable bar a , substantially as specified, so that the size of the discharge opening can be regulated at pleasure.

No. 29,897.—W. D. MASON, of Jarratt's Depot, Va.—*Improvement in Sowing Machines*.—

Patent dated September 4, 1860.—This invention consists in the use of a peculiarly constructed hopper and screws, arranged with a working fan and inclined distributing board.

The inventor says: I *claim* the combination of the rotating screws F with the hoppers D E, when the latter are divided at their lower part into compartments *c* and chambers *d*, substantially as and for the purpose specified.

I further claim, in connection with the hoppers D E, the rotating fan L and inclined board M, as and for the purposes set forth.

No. 29,898.—T. J. MAYALL, of Roxbury, Mass.—*Improvement in the Manufacture of Flexible Gas Tubes*.—Patent dated September 4, 1860.—The claim explains the nature of this invention.

The inventor says: In the manufacture of flexible tubes and other articles which are used for the purpose of conducting or retaining illuminating gas or other gaseous fluids, I *claim* the use of a vulcanizable soft India rubber compound, containing gum shellac as an essential ingredient.

No. 29,899.—WILLIAM McALLISTER, of Gerry, N. Y.—*Improvement in Pressing Cheese*.—Patent dated September 4, 1860.—This invention consists of a crevice hoop, which is placed around the upper corner of the cheese, under the follower, for the purpose of preventing the cheese cloths and band and cheese or curd from pressing up in the crevice between the follower and the hoop, and, in connection with the crevice hoop, to use head cloths, placed at the top and bottom of the cheese, which are used instead of a large single cloth to envelope the whole cheese, as is now used in pressing.

The inventor says: I *claim*, first, the application and use of the crevice hoop, Fig. 1, constructed and used as and for the purposes specified.

Second. I claim the application and use of the head cloths specified, the same being made and used as and for the purposes described.

No. 29,900.—JOHN McKINNEY, of Lansing, Mich.—*Improvement in Railroad Car Couplings*.—Patent dated September 4, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* giving such a shape to the head of the spring actuated shaft P, and such a degree of strength to its spring, that the flat head of the link L, when placed within the buffer frame, will be so closely embraced between the said spring actuated head and the draught pin as to retain said link in a horizontal position when unemployed, substantially as set forth.

When the head of the spring actuated shaft P and the draught pin I bear the described relation to each other and the buffer frame, I also claim the vertical tube G, which rises from the draught pin aperture in the upper plate of the buffer frame, and serves the purpose set forth.

No. 29,901.—ALBERT MOFFET, of Bristol, Ohio.—*Improved Machine for Marking Waving Patterns*.—Patent dated September 4, 1860.—This invention relates to an arrangement of devices, by means of which a regular vine scroll can be laid off, or be caused to vary in its depth by changing continually and gradually.

The inventor says: I *claim* the lever M, sliding bar O, and arm S, arranged and operated in the manner and for the purpose specified.

I also claim the moving fulcrum N, in combination with the connecting rod P¹ and wheel P, operated as and for the purpose specified.

No. 29,902.—JOHN A. NAYLOR, of Rahway, N. J.—*Improvement in Extension Carriages*.—Patent dated September 4, 1860.—A is the main body of the carriage; B is a draw front fitted to slide out and in therein; it is fitted in grooves within the body of the carriage, and is adapted to slide inward and outward to a certain limited extent.

Claim.—The arrangement of the draw front B, folding seat G, and seat F, substantially as described and for the purposes set forth.

No. 29,903.—STEWART NEILL, of Chillicothe, Ill.—*Improvement in Harrows*.—Patent dated September 4, 1860.—This invention consists in the arrangement and combination of parts forming a harrow, in which the weight is thrown upon the revolving cylinder, thus rendering it easy of draught, and by which the soil is pulverized between the fixed and the revolving teeth, and the ground marked off for planting by the markers.

Claim.—The combination and arrangement of the teeth E, toothed roller C, and markers D, substantially in the manner specified and shown.

No. 29,904.—W. T. OPIE, of Scarboro, Ga.—*Improvement in Cotton Presses*.—Patent dated September 4, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of toggle levers applied to the follower, and having friction rollers at their joints, as set forth, when these levers are acted upon by the arm I pressing against their rollers and extending them as described, and when said arm is itself operated by arm J, connecting rods K K, link and lever M, as described and represented.

No. 29,905.—ELHANAN W. ORMSBEE, of Montpelier, Vt.—*Improvement in Apparatus for Collecting Sap from Trees.*—Patent dated September 4, 1860.—This invention consists in providing a cover which, by means of a spring, passed through two ledges on its upper surface and bent at its extremities into a hooked form, and also by means of two projecting points on one of the edges of the said cover, is fastened to the tree.

Claim.—The cover 1, the ledges 2 2, the spring 3, hooked or bent at the ends, as described, and the points 4 4, when the whole are combined and arranged with each other in the manner described and for the purpose stated

No. 29,906.—JOHN OSBORN, of Mt. Carmel, Conn.—*Improvement in Aqueducts.*—Patent dated September 4, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement of the valve chest E, with valves $e e^1$, in combination with the reservoir A B, pipes C D, and pipe F, constructed and operating substantially as and for the purpose set forth.

Second. The arrangement of the swinging box G, in combination with the valve stem f , valves $e e^1$, and reservoirs A B, constructed and operating substantially as for the purpose specified

Third. The arrangement of the float l , lever m , valve k , aperture n , and valve o , in combination with the two chambers $j j^1$, of the box G, constructed and operating substantially as and for the purposes described.

Fourth. The combination, with the box G, reservoirs A B, and pipe F, of the faucets M and O, operating substantially as and for the purposes set forth.

No. 29,907.—A. R. PARK, of Columbia, Texas.—*Improvement in Seeding Machines.*—Patent dated September 4, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A rotary seed distributor, composed of drums $c c$ and longitudinal spiral strips $e e$, for distributing different kinds of seed, in combination with the reciprocating yielding apron D and a seed hopper, substantially as and for the purposes set forth

No. 29,908.—HOMER PARMELEE, of Philadelphia, Pa.—*Improvement in Moulding Metal Pipes.*—Patent dated September 4, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Forming moulds and cores for the casting of cylindrical objects of metal by means of the pipe D, with its flange e , when the said pipe and flange are caused to revolve in a chamber around any desired object to rise as the mould or core is being formed, and to impart, by its weight, the desired solidity and uniformity to the mould or core, as set forth.

No. 29,909.—EBENEZER G. POMEROY, of New York, N. Y.—*Improved Method of Converting Iron into Steel.*—Patent dated September 4, 1860.—The claim explains the nature of this invention.

Claim.—The conversion of iron into steel by its treatment in the molten state with the compound of potash, or other alkali, carbonate of lime, oxyde of manganese, and charcoal, substantially in the manner specified.

No. 29,910.—MILO PECK and CHARLES PECK, of New Haven, Conn.—*Improvement in Drop Presses.*—Patent dated September 4, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The making and constructing of puppet heads, to drop and other presses, with cylindrical shanks, and fitting the same to anvils between raised ledges, or their equivalents, substantially as described and set forth.

No. 29,911.—AUGUST PERNOT, of Chilton, Wis.—*Improved Machine for Sawing Shingles.*—Patent dated September 4, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the reciprocating frames B B, provided with rack bars F F and operated by means of the shaft G and bar K, when used in connection with rocking tables H H, the saw J, plate a , the clamp c , and the bar d , the whole being constructed, combined, and operating in the manner and for the purpose specified.

No. 29,912.—S. L. PIONNIER, of New York, N. Y.—*Improvement in Ship Building*—

Patent dated September 4, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A ship or vessel, constructed with the timbers in close contact, in combination with the wire or metallic supports running fore and aft and athwart ships, substantially as and for the purposes shown and described.

No. 29,913.—BARTON S. PRINGLE, of Barnesville, Ga.—*Improved Bedstead.*—Patent dated September 4, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Attaching the four feet to their respective legs by a rack and pawl, in the manner described, and pivoting these legs to the rails of the bedstead frame, as and for the purposes set forth.

No. 29,914.—J. W. RAMSAY and DANIEL WILSON, of Grafton, Va.—*Improvement in Portable India Rubber Bathing Tubs.*—Patent dated September 4, 1860.—The claim and engravings explain the nature of this invention.

Claim.—An India rubber bathing tub, provided with double sides, in connection with the screw valve *a*, or its equivalent, and arranged substantially as and for the purpose set forth.

No. 29,915.—GEORGE G. RAY, of Boston, Mass.—*Improved Steam Reed Instrument.*—Patent dated September 4, 1860.—This invention consists of a vessel or chamber communicating with a steam boiler and having one or more orifices for the escape of the steam which is admitted to it, each orifice being covered by a reed, so that the escaping steam will produce a musical sound, which may be used for an alarm or a signal, or by a combination of a number of such chambers and reed-covered openings a musical instrument may be produced.

Claim.—The chamber *D* communicating with a steam boiler, and furnished with one or more orifices or slots *i* and corresponding reeds *m*, substantially as described, for the purpose specified.

No. 29,916.—JOHN REVERE, of Boston, Mass.—*Improvement in Sheathing Ships, &c.*—Patent dated September 4, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the application, to the inner surface of metallic sheathing of a ship, or other vessel, and with respect to the bottom of the vessel, as described and for the purpose set forth, of an insulating material or composition of the character specified.

I also claim, in combination with such an application of such an insulating composition, extending it between the laps of the metallic sheets of sheathing, as and for the purpose explained.

No. 29,917.—LOUIS SCHNEIDER and J. A. MONTGOMERY, of Williamsport, Pa.—*Improvement in Self-Acting Draw Bridges.*—Patent dated September 4, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The self-acting draw bridge, described, capable of being turned in either direction by a passing vessel and closing itself with a constant force from any position, in the manner substantially as set forth.

No. 29,918.—GEORGE C. SELFRIDGE, of North Greenfield, N. Y.—*Improvement in Pumps.*—Patent dated September 4, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* a pump constituted of an upper and lower chamber, the upper chamber being of one half the area of the lower one in diameter, placed one above the other, having a solid piston moving in the upper and a valved piston moving in the lower chamber, both attached to the same rod and operating in combination with a fixed valve seat and its valves below the discharge orifice lying between the pistons, the whole arranged and working together in the manner and for the purposes set forth in the above specification.

No. 29,919.—THOMAS SHEEHAN, of Dunkirk, N. Y.—*Improved Method of Converting Iron into Steel.*—Patent dated September 4, 1860.—This invention consists of two parts; the first being a liquid composition, and the second a compound of flour and said liquid composition.

The inventor says: I *claim*, first, the liquid composition consisting of the ingredients used, compounded in or in about the proportions specified and described.

Second. The compound for steelifying wrought iron, made of the liquid composition and flour, in the manner and for the purposes set forth.

No. 29,920.—HENRY C. SMITH, of Clarksville, Ohio.—*Improvement in Mortising Machines.*—Patent dated September 4, 1860.—This invention consists of peculiar devices for operating and feeding a circular cutter head.

Claim.—The pitman H e, link I, and pin d, operating in connection with a reciprocating rotary cutter head F, in manner substantially as and for the purposes set forth.

No. 29,921.—WILLIAM S. SMITH, of Trenton, N. J.—*Improvement in Driving Piles by Atmospheric Pressure.*—Patent dated September 4, 1860.—This invention consists in furnishing the air lock, which is employed to form the cap of the pile in driving, with a supplementary air lock, so applied as to permit the discharge through it of solid matters which may have been taken from within the pile, while water is excluded by an artificial pressure of air within the main air lock and pile, without the necessity of opening the main air lock to the external atmosphere.

Claim.—The supplementary air lock D, applied substantially as described, in combination with the main air lock, and serving the purpose specified

No. 29,922.—JOHN M. SPENCER, of Enfield, Me.—*Improvement in Hand Mowing Machine.*—Patent dated September 4, 1860.—This machine is intended to be put in operation by an individual laying hold of the handles and pressing the machine onward in front.

Claim.—The arrangement of the serrated cutter F, two sets of gears K L, two cranked shafts I I, and the belts G G, (applied to such cutter and cranks,) substantially in manner and to operate as described.

No. 29,923.—HENRY D. STOVER, of New York, N. Y.—*Improved Planing Machine.*—Patent dated September 4, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, constructing that part of the dogging apparatus E¹, carrying the dogs F¹, with adjustable and variable inclined planes J¹, pressing against pins or surfaces A⁴, attached to the platen B, so that any desired pressure by the adjustable planes J⁴ may be given, both to press the dogs forward into the lumber and hold them securely down to the platen by the turning of a single screw H¹, essentially in the manner described.

Second. The combination of the downward drawn guide bar C⁷, with the dogs F¹, cross-bar L¹, and revolving nut G¹, substantially in the manner and for the purpose set forth.

Third. The employment of flat cutters, bevelled on their outer surface and parallel to the axis of the cutter head; the cutting edges being in the surface of a cylinder whose axis is coincident with the axis of motion, so as to impart a drawing stroke, substantially as set forth.

Fourth. The combination of the cutting cylinder U², formed with recesses r, and pressure edge v, with the peculiarly constructed cutters V², and the devices by which they are adjusted upon the cutter head and secured thereto, substantially as specified.

Fifth. So constructing, arranging, and combining the parts constituting the roll feed, i. e. the shaft X¹, the pinions A², B², C², and Z¹, or their equivalents, and the platen feed, i. e. shaft X¹, lever sleeve P², arms R⁴ and S², and pinions P⁵ and Q², that, by the act of lowering the rolls to be used, its feed is connected and the platen feed disconnected; and by the raising of the rolls the feed is connected with the platen, substantially as set forth.

Sixth. Making the platen in two parts B and C, with a ball F between, so that the top part may be tipped universally and secured by straps n, or otherwise, in any position, so that a piece may be planed level and parallel in thickness or tapering, as set forth.

Seventh. So constructing the feed roll boxes R¹, that they carry the pressure within them, so as to be invariable under any elevation of feed roll, substantially as described.

Eighth. I also claim the feed rolls O¹ and O², their frame Q¹, and the platen or rest B⁶, firmly affixed thereto, and to come under the cutting cylinder when in use, if desired, so as to always be level and on a line with top of the lower feed roll O², with or without matching cutters J², as set forth.

Ninth. I also claim rollers B⁴, connected adjustably to the bedpiece A, to wholly sustain and guide the movable platen B and C, or in connection with tracks N¹, so as to receive the weight of the timber on the rollers B⁴, and its guidance from the tracks for the easy movement of platen when carrying loads, as set forth.

Tenth. I also claim so combining friction feed apparatus, consisting of lever L, having its fulcrum at Q, and its belt wheels N A¹ and B¹, and its friction rolls O and P, and wheel G, on shaft X¹, with the platen B and C, that a heavy piece of timber may be gradually and easily started into motion, stopped suddenly and reversed, and obviate the shock and destruction of parts consequent on starting suddenly, as described.

Eleventh. I also claim so constructing and combining matching cutters X and W, with the movable platen B and J², with feed rolls O¹ and O², that a cutter will automatically find and correctly match the entire length of each edge of a board or piece regardless of its taper, width or the direction it passes through the machine, as described.

Twelfth. I also claim forming mouth pieces or openings e, between the teeth c, of the solid dogging racks B¹⁰, to prevent shavings and chips lodging and clogging therein, all substantially as described and for the purposes fully set forth.

No. 29,924.—JAMES C. TEAGUE, of Centre Hill, Miss.—*Improvement in Cotton Scrapers.*—

Patent dated September 4, 1860.—The claim and engravings explain the nature of this invention.

The inventor says : I *claim* the arrangement and combination of the cast iron box G, with inclined bottom and balanced sides, bar C, for attaching to the beam and movable weights, to increase or diminish the weight of the scraper and keep it balanced, substantially as specified.

No. 29,925.—WILLIAM D. THOMAS, of Morristown, Vt.—*Improvement in Furnaces*.—Patent dated September 4, 1860.—The part lettered A is the body of the furnace ; B is the flange surmounting the sides of the furnace ; C C are the openings for the escape of the gases and smoke from the fire to the flues ; D is the aperture leading to the smoke chimney ; E and F F are the dampers, one open and the other closed ; P represents the evaporating pan when in position for use.

Claim.—The arrangement of the side flues and dampers relatively to the pan, as and for the purpose set forth.

No. 29,926.—WILLIAM H. TOWERS, of New York, N. Y.—*Improved Broom*.—Patent dated September 4, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The broom constructed of broom corn and strips of cane or reeds, substantially as described, as a new article of manufacture.

No. 29,927.—NICHOLAS K. WADE and JOSEPH KAYE, of Pittsburg, Pa.—*Improvement in Car Wheels*.—Patent dated September 4, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The use of arms or spokes of wrought iron, or other flexible material, of single or double curvature, and so placed in the hub and rim as to afford a lateral brace, substantially as set forth and shown in the accompanying drawings.

No. 29,928.—MAXIMILIAN WAPPICH, of Sacramento, Cal.—*Improvement in Cotton Presses*.—Patent dated September 4, 1860.—This invention consists of pawls acted on by a cross shaft and revolving inclines, giving motion to the platen that compresses the goods ; and the operation of the parts is resisted by yielding journal boxes, so that the parts are more reliable, as they are not subjected to a sudden and unyielding strain.

Claim.—The ratchet frames *ff*, and pawls 6 6, acted on by the roller *e*, and fluted wheel *c*, as and for the purposes specified.

No. 29,929.—EDWARD P. WHITNEY, of Westfield, N. Y.—*Improvement in Locks*.—Patent dated September 4, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The construction of the latch C, with double projections *d* and *f*, so that the lock may be used as a right or left hand lock, as desired, by merely turning the latch C ; all as shown and described.

No. 29,930.—DAVID H. WHITTEMORE, of Lynchburg, Va.—*Improvement in Hay and Straw Cutters*.—Patent dated September 4, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, so arranging the feed teeth M M, &c., upon a revolving cylinder or flanges that said cylinder or flanges will, while revolving with the half of said teeth, both draw the feed forward and, in passing by a stationary knife, cause it to be cut off, substantially as described.

Second. I claim combining, with said cylinder, the spring board G, in the manner and for the purpose substantially set forth.

Third. I claim combining, with said cylinder and spring board, the stationary knife O, substantially as described.

No. 29,931.—E. S. WICKLIN and J. D. WEAVER, of Carlinville, Ill.—*Improvement in Carriages*.—Patent dated September 4, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A buggy seat, divided or not, hinged to the back end of the floor of the buggy, and furnished with stepping boards on its under side, substantially as set forth, so as to serve the twofold purpose of a seat and as steps by which to enter or leave the buggy from behind.

No. 29,932.—CHARLES A. WILSON, of Cincinnati, Ohio.—*Improvement in Steam Heating Apparatus*.—Patent dated September 4, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A tubular radiator communicating at bottom with a steam pipe A, and its upper

and free end discharging into the atmosphere through an aperture guarded by an automatic valve; the whole being constructed and operating substantially as and for the purposes set forth.

No. 29,933.—DAVID WOOSTER, of Seymour, Conn.—*Improvement in Lightning Rods*.—Patent dated September 4, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, firmly securing together the ends of the rod A, and the sleeve B, by means of the grooves *c c*, as described.

Second. I claim the treble jointed piece F, when made out of sheet metal, substantially as described.

No. 29,934.—G. W. N. YOST, of Yellow Springs, Ohio.—*Improvement in Cultivators*.—Patent dated September 4, 1860.—This invention consists in the manner of arranging the sockets with the beam and standards, and the combination of the various parts.

Claim.—The arrangement of the sockets *b*, with beam A, and standards *a*; the whole being constructed as and for the purpose described.

No. 29,935.—JOSEPH F. HALL, of Bangor, Me., assignor to himself and G. L. KELTY, of New York, N. Y.—*Improved Curtain Fixture*.—Patent dated September 4, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Constructing the spool in two parts, one of which is affixed to the roll, and the stem of the other plays into the end of the roll, and is acted upon by a spring to push it out, thus keeping one of the flanges always in contact with the end of the roll, as set forth.

No. 29,936.—JUSTUS ASK, of Lyons, N. Y., assignor to JAMES H. CASE, of the same place. *Improvement in the Construction of Dental Chairs*.—Patent dated September 4, 1860.—The movable seat is provided with supplementary arms S, which, when the seat is down, fit the inner form of the permanent arms T, and serve as cushions thereto; but which, being fixed to the seat, rise with it, and always remain at the same height above its surface.

The inventor says: I *claim* the combination of the fixed screw F, nut wheel G, and its appurtenances, movable seat D, and frame A, arranged and operating substantially in the manner and for the purposes shown and described.

I also claim the arched supporting frame A, with the seat frame B, hinged thereto, in combination with the adjusting lever J, and bail *k*, arranged and operating substantially as and for the purposes set forth.

I also claim the supplementary seat arms S, substantially as and for the purpose described.

I also claim the bellows formed diaphragm R, in combination with the movable seat and frame B, substantially as set forth.

No. 29,937.—A. F. HINES, of Washington, D. C., assignor to himself and B. A. KIDDER, of the same place.—*Improvement in Seed Planters*.—Patent dated September 4, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of two reciprocating valve slides D F, the surfaces of which are smooth and without recesses or perforations, in combination with an arm E, lever L, and spout B, one valve working through an aperture C in the side of the spout, while the other valve F works in contact with the under face of the spout, constructed in the manner and for the purposes set forth.

No. 29,938.—JOHN M. LONG, of Hamilton, Ohio, assignor to himself, PETER BLACK, and R. ALLSTATTER, of the same place.—*Improvement in Harvesters*.—Patent dated September 4, 1860.—This improvement consists in an arrangement for elevating the cutter bar and for lowering the same readily.

Claim.—Lever I, tooth slide *c*, bar *f*, band *e*, and braces *g g*, constructed, arranged, and operating substantially as described, in connection with draft pole A.

No. 29,939.—FRANCIS A. PRATT, of Hartford, Ct., assignor to himself and GEORGE S. LINCOLN & Co., of the same place.—*Improvement in Devices for Stopping and Changing Motion*.—Patent dated September 4, 1860.—This invention consists in the construction and arrangement of a proper clamp or friction device for the purpose of stopping or changing the back and forward motion of a counter shaft for lathes, &c., where two loose driving pulleys are used on the counter shaft and one driven by a straight or open belt, and the other by a cross belt.

The inventor says: I *claim*, first, the combination of the levers or clamps *e*, disk or collar *j*, substantially as and for the purpose described.

Second. I claim the application of a wedge collar *l*, or its mechanical equivalent, for the purpose of operating the said levers or clamps *e*, as described.

No. 29,940.—JOHN H. REED, of Penn Township, Pa., assignor to himself and L. J. CRANS, of Clearfield, Pa.—*Improvement in Machines for Cleaning Buckwheat, &c.*—Patent dated September 4, 1860.—The claim and engravings explain the nature of this invention.

Claim.—One cylinder revolving in another, the inner or revolving cylinder so grooved that, while conducting the buckwheat or other grain from the place of feeding to the place of discharge, the grain shall pass through a regularly diminishing space and thus be scoured or cleaned, as above set forth.

No. 29,941.—AUGUST SCHMIDT, of New York, N. Y., assignor to himself, CHARLES SCHMIDT, EDWARD SCHMIDT, and HERMAN SCHMIDT, of the same place.—*Improvement in the Mode of Making Gas from Wood.*—Patent dated September 4, 1860.—This invention consists in the process of making gas from wood by the introduction of steam into the retort among the incandescent charcoal immediately after the gas has ceased, or almost ceased, to pass off from the wood, whereby a combination is effected between the water and carbon in consequence of the peculiar condition of the carbon, so that the gas resulting is of a character adapted to lighting purposes.

Claim.—The manufacture of illuminating gas from wood by the successive processes set forth.

No. 29,942.—GEORGE WILLIAMSON, of Newark, N. J., assignor to L. S. GOBLE and H. E. RICHARDS, of the same place.—*Improved Machine for Chamfering Veneers.*—Patent dated September 4, 1860.—B B are the ways, and B¹ is a plate of metal connecting them together; C is the frame table attached to, and constructed to slide upon, the ways, upon which is placed the material E to be chamfered; D is a spring clamp attached to the frame or table C, and adjusted on hinges.

Claim.—The combination of the adjustable ways B B, the frame C, spring clamp D, and spring m, substantially in the manner and for the purposes described.

No. 29,943.—O. P. ALLEN, of Rindge, N. H.—*Improved Clothes Dryer.*—Patent dated September 11, 1860.—When the arms A are spread as far as the cords or lines f which unite the same will permit, the upper bracket D passes over the stem, and two ropes g which are firmly secured to the flange of the upper bracket serve to depress said bracket and to spread the arms until the lines f are taut. The ropes g extend through holes in the lower bracket B, close down by the sides of the post E, so that they can be easily reached from the ground.

Claim.—A clothes dryer, having in combination the metallic brackets B D, with sleeves c, and flanges d, rivets or wires a b, ropes g g, arms A, braces C, and post E, and operating as and for the purpose set forth.

No. 29,944.—SAMPSON AMERICAN, of Chicago, Ill.—*Composition for Toilet.*—Patent dated September 11, 1860.—The claim explains the nature of this invention.

Claim.—A compound formed by the admixture of oil of turpentine, alkanet root, alum, the oil of roses, and the oil of neroli, substantially in the manner and for the purposes specified.

No. 29,945.—S. C. AMES, of Washington, Arkansas.—*Improvement in Cotton Cleaners.*—Patent dated September 11, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim the employment or use of a screen C, divided into two or more compartments communicating with each other, and provided with beaters f, and one or more of them provided with oblique deflecting blocks i, the latter being arranged relatively with the opening or openings h, to give the cotton a lateral movement from one compartment to the other, substantially as and for the purpose set forth.

I further claim, in connection with the screen C, the case or box A, provided with the ledge or projection l at its upper part, the case being so arranged over the screen as to allow spaces j j at each side of it, for the purpose set forth.

No. 29,946.—DAVID BARGER, of Columbia, N. Y.—*Improvement in Threshing Machines.*—Patent dated September 11, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination and arrangement of the adjustable blast board m¹, hook l¹, staples n¹ n² n³, upper shoe s¹, lower shoe u¹, furnished with sieves numbered 1, 2, 3 and 4, operated by the two connecting bars m and h, working on opposite sides of the winnower and from the same shaft, as specified.

No. 29,947.—EVERETT BASS, of Calhoun County, Georgia.—*Improvement in Tightening Tire on Wheels*.—Patent dated September 11, 1860.—This invention consists in lapping the ends of the tire in such a manner as that they may be tightened by inserting a clasp and key perpendicularly through the lap in the tire, constructing the hole through which the clasp and key is inserted, so that the forcing the key through will draw the tire, regaining the drawing effect of the key by adding a slip or slips to the clasps.

Claim.—The arrangement of the clasp H, slips X, key F, plate bolt head B, and inner plate S, when used for the purposes described.

No. 29,948.—LEVI A. BEARDSLEY, of South Edmeston, N. Y.—*Improvement in Hay Elevating Forks*.—Patent dated September 11, 1860.—This invention consists in constructing a device for elevating hay by a rope, or chain and pulleys, in such a manner that the bundle of hay to be elevated will be grasped tightly by four curved teeth and held compactly by said teeth while it is elevated, and when the hay is to be discharged a latch and chain are so applied to the teeth by jerking a string attached to the latch, that the teeth will open and allow the bundle to fall.

Claim.—The gang forks A A jointed together, as set forth, with the chains c and B B attached to them, in combination with the tripping latch e, tripping plate g, and loop C, arranged and operating substantially in the manner and for the purposes set forth.

No. 29,949.—LEONARD BRICKER, of Springfield, Ill.—*Improved Combination of Smoothing Iron and Lamp*.—Patent dated September 11, 1860.—The inventor says: I construct my irons in any of the known forms of the rotary or two-faced smoothing irons, and then I make my lamp in any desirable form, and construct the tube in such a form that the end of the wick be as high as the top of the fluid in the body of the lamp, the object to be attained being the use of a loose wick, and thus avoiding the great inconvenience of using the tight wick necessary in a lamp of any other form, for the purpose described.

Claim.—The arrangement and combination of the lamp with elevated tube B, and guard C C, dovetail A A, and smoothing iron, all in the manner and for the purpose described.

No. 29,950.—H. R. BURGER, of Richmond, Va.—*Improved Machine for Grinding Saws*.—Patent dated September 11, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, so arranging the saw supporting disk, shaft I, the feed carriage and the gearing, that said shaft is moved laterally independently of the carriage and simultaneously therewith, the shaft and carriage moved together longitudinally, substantially as and for the purposes set forth.

Second. The combination of the gauge stop R, and its adjusting screws, with the sliding shaft I, and the mechanism by which it is controlled and actuated, substantially as and for the purposes set forth.

No. 29,951.—ELISHA W. CADY, of Tomah, Wis.—*Improvement in Self-adjusting Braces for Jack Screws or other Hoisting Apparatus*.—Patent dated September 11, 1860.—The superiority of this invention consists in the simplicity of its construction and the ease with which it can be attached to anything needing a brace of this description, and the facility with which a machine to which it is attached can be adapted to even or uneven ground, and the relief from strain which it gives to those parts of the uprights which are the most likely to yield. So says the inventor.

Claim.—The combination of a self-adjusting brace, composed of the arms D D F F, and the evener E, and constructed substantially as set forth.

No. 29,952.—M. C. CHAMBERLIN, of Johnsonsburgh, N. Y.—*Improvement in Self-detachable Whiffletrees for Vehicles*.—Patent dated September 11, 1860.—A represents the thills, which are constructed in the usual manner and connected together at their rear by means of the cross piece E. To this cross piece are secured two bell cranks a a, being pivotted to said piece near its extremities, as seen at x x; d d represent two rods with one of each of their ends connected to one of the arms of the bell cranks. The other ends of said rods pass into a sleeve c.

Claim.—The combination of the bell cranks a a, with the rods d d, and the sleeve c, when the same are used, substantially as and for the purpose specified.

No. 29,953.—D. W. CLARK, of Stratford, Ct.—*Improvement in Stirrups*.—Patent dated September 11, 1860.—This improvement consists in the employment within the stirrup of a laterally adjustable bar B, whereby the open space between the side pieces of the stirrup may be contracted at pleasure, and thus be fitted to the size of any rider's foot, so as to prevent the foot from passing too far through the stirrup.

Claim.—The employment, within the stirrup A, of a laterally adjustable bar B, substantially in the manner and for the purpose shown and described.

No. 29,954.—GEORGE COLLYER, of Appoquinimink Hundred, Del., and A. H. PATTERSON, of Philadelphia, Pa.—*Improvement in Car Couplings for City Railways*.—Patent dated September 11, 1860.—The attachment D is of cast iron, so made that the overhanging part *d* and the bed plate or bottom part *d*¹ shall form a socket for the projection *a*¹ of the box; it is secured firmly, by means of bolts *e*, to the top of the platform of the car, at the edge of the platform, which is rounded so as to conform with the shape of the bed plate.

The inventors say: We *claim*, first, the shoulder *a*, constructed and arranged in the manner and for the purpose substantially as set forth.

Second. The attachment D for joining the box to the car, constructed and arranged substantially as set forth.

No. 29,955.—SAMUEL L. DONNELL, of South Carroll, Tenn.—*Improved Grading Instrument*. Patent dated September 11, 1860.—This invention relates to the arrangement of a suspended bubble block with a plumb, sliding weights, and a stand to which the block is suspended, by means of which the adjustments for levelling and grading can be made with facility and accuracy.

Claim.—The arrangement of the suspended bubble block N with the sliding weights *d*, plumb I, turning table H, and supporting rod R, substantially in the manner and for the purpose described.

No. 29,956.—JOHN H. DUNBAR, of Plymouth, Conn.—*Improved Saw Clamp*.—Patent dated September 11, 1860.—This improvement consists in providing properly formed clamps, which may be secured to any desirable place or position for use by any ordinary fastenings, and in forming in the said clamps an adjustable fulcrum on which the eye of the saw is placed and turns, and its toothed edge is kept in its proper relation to the edge of the clamps while the filing is being performed; and also in making the fulcrum so that it may be readily adjusted to receive and hold a saw of any diameter, and also to receive and remove a saw nearly or quite as quick as though it were placed in the jaws of an ordinary vise.

Claim.—An improved article of manufacture, viz: the slotted jaws *a*, fulcrum pin or bolt *d*, having the collar *e*, nut *g*, in combination with the lever cam *i*, substantially as and for the purpose described.

No. 29,957.—WRIGHT DURYEA, of New York, N. Y.—*Improved Device for Jointing Boxes*. Patent dated September 11, 1860.—This improvement consists in the use of angular strips of metal to be inserted endwise into slots cut into the bevelled ends of the box stuff, by sawing or otherwise, so that these strips, when inserted, will bind and secure the corners tightly together.

Claim.—The joining of the ends of boxes by the insertion of the angular strips of metal into the corners of the box, substantially as set forth.

No. 29,958.—MATTHEW ELDER, of Lansing, Mich.—*Improvement in Brick Moulds*.—Patent dated September 11, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement of the compartment frame and the respective followers G G with the pairs of rods *a a* and *b b*, the cross heads F F, the short bolts *c c*, the longitudinal bars E E, and the connecting arms *d d*, in such a manner that the said compartment frame can be entirely withdrawn from the sides and ends of the moulded bricks, whilst the followers remained stationary, substantially in the manner set forth.

I also claim the interposition of the springs *e e*, or their equivalents, between the cross heads F F and the ends of the longitudinal bars E E, when the said parts bear such a relation to the other parts of my improved brick mould that the followers G G will remain stationary whilst the compartment frame is being drawn past them, and then the said followers and frame may be simultaneously elevated a short distance, whilst the cross heads E F remain in a stationary position upon the rods *a a*, by which I effect a clear and clean separation of the compartment frame and the followers from the moulded bricks, substantially in the manner set forth.

No. 29,959.—E. G. ELLIOTT, of Elk Horn, Wis.—*Improvement in Watches*.—Patent dated September 11, 1860.—The object of this invention is to obtain for the balance wheel a very high speed and a great range of vibration, of so positive a character that no shaking can change it.

Claim.—The combination of the revolving piece *e*, the pin or projection K on the balance wheel or staff, and the stationary banking pin *l*, substantially as and for the purpose specified.

No. 29,960.—A. H. EMERY, of New York, N. Y.—*Improvement in Anti-Friction Presses*. Patent dated September 11, 1860.—This invention consists in constructing a press for pack-

ing cotton, hay, or any other similar material, by means of an arrangement of cams or eccentrics in combination with lifting rods, pawls, wheels, plateaus, and other parts.

Claim.—The combination and arrangement of the described press, constructed and operating substantially as described.

No. 29,961.—M. H. FERGUSON, of Sunfish, Ohio.—*Improvement in Feeding Grain to Mills.* Patent dated September 11, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the cup M, adjusting tube K, block O, and pipes or tubes P, leading far down into the eye of the runner, and used in connection with the draught of air, the whole forming a feeding device and operating substantially in the manner and for the purpose set forth.

No. 29,962.—CHARLES FLEMING, of Ypsilanti, Mich.—*Improvement in Moulding Planes.* Patent dated September 11, 1860.—The inventor says: To use the tools, either one fourth or ogee, attach the gauge D; let the iron be so ground and set in the tool that it shall cut a fair shaving at the face E and scarcely cut at all at the side F; set the board on edge in the vise of the workman and apply the tool in the ordinary way; and when the work is complete the gauge D will arrest the further working of the tool without thought or care on the part of the workman.

Claim.—The combination of the guide strip D, with one fourth round and ogee moulding planes, for the purpose set forth.

No. 29,963.—GEORGE FREEMAN, of New York, N. Y.—*Improvement in Wood Screws.*—Patent dated September 11, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination, with a wood screw, of a counter-sinking tool or cutter, by providing or forming the head of a screw with a cutter or cutters, for operation substantially in the manner described.

No. 29,964.—OLIVER L. GIBSON, of Fort Bend County, Texas.—*Improvement in Cotton Seed Planters.*—Patent dated September 11, 1860.—This invention consists of a machine for planting seed with the entire bottom of the box, which contains the seed, movable, for the purpose of conveying the seed in the box to that part of the box from which they are to be dropped, and partly changeable, for the purpose of making it applicable to the kind and quantity of seed to be planted in a given place or space.

Claim.—The seed box, with its movable and changeable parts, in connection with the balance of the machine, when the same is so constructed and arranged as to plant seed in the manner described.

No. 29,965.—EDMUND GREENLEE, of Summerhill Township, Pa.—*Improved Stave Jointer.* Patent dated September 11, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination of the planes B B¹, stocks C¹, united by the links C, guide rods K, guides D, and bow strings R, when arranged together for joint operation, substantially in the manner and for the purpose described.

Second. The combination of the adjustable frame F with the guides D which carry the reciprocating planes, when arranged relatively to the bed upon which the stave rests while being jointed, as described.

Third. The combination of the reversible follower M with the spring Z and dogs x x¹, when arranged and operated as described, for the purpose set forth.

No. 29,966.—C. P. GRONBERG, of Aurora, Ill.—*Improvement in Raking Attachments for Harvesters.*—Patent dated September 11, 1860.—This invention relates to an improvement in that class of raking devices for harvesters in which the rake moves in the arc of a horizontal circle over the platform and has a rising and falling movement, a falling at the rear end of the platform, so as to work in close proximity to the latter while moving towards its front end in order to rake the cut grain therefrom, and a rising one at the front part of the platform, so that the rake may pass above or over the grain on the platform to the back end thereof.

Claim.—The bent rake shaft E fitted in the vibrating frame D, in connection with the projection q and chains m p, attached respectively to the lever j and arm o, all being arranged for joint operation as and for the purpose set forth.

No. 29,967.—J. R. HALL, of Brunswick, Me.—*Improved Machine for Sawing Shingles.* Patent dated September 11, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement of the loaded lever L, connected with shaft J, the shafts C H E, the loaded arm N, rod M, provided with catch K, lever O, and the pendant *p* and projection *q* on the bolt carriage, as and for the purpose set forth.

Second. The rods Z A¹ fitted in the carriage B, provided with the cam projection *b*¹ *c*¹, in connection with the uprights *d*¹ attached to the frame A, and the bent levers V Y, palls U X, and ratchets T W, provided with the alternate long and short teeth, all being arranged to operate substantially as and for the purpose set forth.

Third. The application of the spring *e* and the cam shaft B¹ to the frame S of the bolt carriage, as shown and described, for the purpose of facilitating the adjustment of the bolt in the carriage, and the retaining of the same within the carriage, as set forth.

No. 29,968.—S. Z. HALL, of Seguin, Texas.—*Improvement in Feeders for Cotton Gins*.—Patent dated September 11, 1860.—This invention consists in the relative arrangement of the endless apron, toothed roller, and adjustable cut-off board of the hopper, whereby the quantity of cotton introduced to the roller by the belt can be controlled, and thus a greater or less quantity be delivered into the gin stand in a given time, as the necessity of the case may demand.

Claim.—The combination of the feed apron D, delivering roller C, swinging frame M, with its attached gearing and rocking lever I, with its actuating gearing, substantially as and for the purposes set forth.

No. 29,969.—A. E. HARDING, of Middletown, Ohio.—*Improved Marine Propeller*.—Patent dated September 11, 1860.—This invention relates to propellers which have a horizontal reciprocating motion, and which act upon water by a plane vertical surface.

Claim.—The frame B, vertical supports *c*, dead wood extension B, and horizontal guiding bars *l*, in combination with the reciprocating folding propellers C C, the whole being constructed and arranged in the manner and for the purposes substantially as set forth.

No. 29,970.—JOHN R. HARRINGTON, of New York, N. Y.—*Improvement in Machines for Making Carpet Lining*.—Patent dated September 11, 1860.—This invention consists in the use, in combination with the other parts of the machine, of the frame work I, upon which are placed the endless apron K and rollers L L, employed in the face of a spindle, or rollers previously used, resting in oblique slots, and around which is wound a cotton bat or lap.

The inventor says: In combination with the spindles *b* *b*¹, on which the outer sheets or rolls of paper, or other material employed are wound, I *claim* the feed table I, endless apron *k*, and rollers L L¹ L, when the same shall be arranged and operated as described, and for the purpose specified.

No. 29,971.—ISAAC HAYDEN, of Lawrence, Mass.—*Improvement in Cotton Cleaners*.—Patent dated September 11, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A trunk for cleaning cotton and other substances, dividing it horizontally or centrally with a screen of woven wire or twine, with cells or compartments under said screen, so small as to prevent or break the current of air under said screen, substantially as described, in combination with a machine substantially such as is described in this specification, or its equivalent, for opening the cotton and blowing it through said trunk over the screen, substantially as described.

No. 29,972.—A. HOAGLAND, of Jersey City, N. J.—*Improved Wash Board*.—Patent dated September 11, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The pivoting of a vibrating frame A at *x*, when such vibration is controlled by the springs B, and the frame A is enclosed within a common hand washboard, all in the manner and for the purpose set forth.

No. 29,973.—ANSEL HOLMAN and OLIVER A. KELLY, of Slaterville, R. I.—*Improved Machine for Hardening Scythes*.—Patent dated September 11, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim* the combination of clamps of suitable size and form to hold the blade to be tempered, with ribs arranged upon the faces of the clamps next the blade to be hardened, in directions crosswise to each other, substantially as set forth.

We also claim the combination of a set of clamps curved in a direction the reverse of that in which the blade warps in hardening, with mechanism for closing the clamps upon the blade and immersing them in the hardening liquid, substantially as set forth.

We also claim the combination of clamps for holding the blade, with mechanism that immerses them rapidly in the hardening liquid and then moves them slowly therein, substantially as set forth.

We also claim the combination of clamps for holding the blade during immersion, with mechanism that moves the clamps laterally in the hardening liquid, substantially as set forth.

We also claim the combination of clamps for holding the blade during immersion with mechanism that reverses and opens the clamps, so that the blade is delivered automatically from the clamps, substantially as set forth.

We also claim mounting a receiving table in such manner, with reference to the clamps, the mechanism for operating the same, and the vat of hardening liquid, that the hardened blade is received upon said table after hardening is effected.

We also claim the combination of a shaft, to which an intermittent rotary motion is to be imparted, with a continuously revolving shaft, by means of ratchet wheel having teeth of different size and a reciprocating pawl, substantially as set forth.

We also claim the combination of the next preceding combination with a second pawl, substantially as set forth.

No. 29,974.—F. A. HULL, of Belvidere, Ill.—*Improvement in Grates for Steam Boilers*.—Patent dated September 11, 1860.—This invention consists in arranging a grate with two or more sections, which are hinged at one end and supported by separate crank levers or links, in such a manner that each of the sections can be raised or dropped independent of the other section or sections, and that the fireman is enabled to clean one section after the other without putting out the fire.

Claim.—The arrangement of the crank levers D E, in combination with the hinged sections B C of a grate, constructed and operating as and for the purpose set forth.

No. 29,975.—CHARLES F. JOHNSON, CHARLES F. JOHNSON, JR., and WILLIAM W. JOHNSON, of Owego, N. Y.—*Improved Lock*.—Patent dated September 11, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The travelling carriage *f*, arranged substantially as specified, to move forward with the bolt and leave it projected, or move forward and connect to said bolt and draw the same back, as set forth, in combination with tumblers *o* moving with said carriage and acting between the tumblers *m* and *p*, as specified.

No. 29,976.—WILLIAM W. JUSTIS, of Genito, Va.—*Improvement in Machines for Straightening and Pressing Tobacco*.—Patent dated September 11, 1860.—This invention consists in passing the bundles of leaves between adjustable parallel clamps, vertical guide rollers and guides, and horizontal yielding rollers.

Claim.—The clamping bars D D¹, sash frame E, treadle F, perpendicular guide rollers H H, and guides or tongues N N, with the movable drums J¹ and yielding drums J, the whole being combined, arranged, and operating in the manner and for the purposes set forth.

No. 29,977.—DANIEL LASHER, of Brooklyn, N. Y.—*Improvement in Grate Bars*.—Patent dated September 11, 1860.—This invention consists of a series of alternately connected parallelograms, upon a cross bar or support, whereby a larger air space is obtained than in the ordinary grate bars, and at the same time the surface is such that the scraper or stirrer will not catch therein, and the weight of the grate bars, with a corresponding strength, can be reduced one third.

Claim.—Forming grate bars with the alternately connected parallelograms *b b*, in combination with the bar *a* beneath, and connecting the same, as and for the purposes specified.

No. 29,978.—BENJAMIN F. LEE, of New York, N. Y.—*Improvement in Railroads*.—Patent dated September 11, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Studding the track of a line of railroad, or exposed portions of it, with upper projecting spikes, or their equivalents, substantially as and for the purpose set forth.

No. 29,979.—PIERRE A. LETOURNEUR, of New Orleans, La.—*Improved Cement*.—Patent dated September 11, 1860.—This cement consists of the following ingredients: Red oxyde of iron, one gallon; white zinc paint, one gallon; plaster of Paris, one half gallon; linseed oil, boiled, one gallon.

The inventor says: I claim a cement which I call indestructible cement, composed of the above substances, prepared as aforesaid, which will make the roofs and other places covered with it both fire and water proof.

No. 29,980.—CALVIN A. LITTLEFIELD, of Covington, Ky., assignor to himself and DAVID BOYLE, of said Covington.—*Improvement in Fire Places*.—Patent dated September 11, 1860. This invention consists in an arrangement of hollow crown and hot and cold air passages.

Claim.—The arrangement of the bonnet B, hollow crown E, partition *e*, tube H, flues B B¹, apertures K F G, and doors *f* and *k*, constructed, combined, and operating in the manner and for the purposes set forth.

No. 29,981.—JULIUS LOEB, of New York, N. Y.—*Improvement in Thread Dressing Machines.* Patent dated September 11, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The diagonally grooved flanges or ribs *e e*, on the revolving brush, to separate, loosen, and spread the threads composing the skeins, so that the brushes *b* may act equally on all sides of said threads to glaze the same, as set forth.

No. 29,982.—IRA MASON, of Berlin, N. H.—*Improvement in Saw Teeth.*—Patent dated September 11, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, shaping saw teeth, substantially as described, so that the edges 2 2 operate with a drawing cut, and leave the boundary of the kerf square with the sides thereof.

Second. The peculiar set given to the teeth, herein shown and described.

Third. Giving to the teeth of a saw, in combination, the form and set as above claimed.

No. 29,983.—GEORGE MARLOW, of Cincinnati, Ohio.—*Improvement in Apparatus for Heating Buildings.*—Patent dated September 11, 1860.—The fire pot A is arranged on top of the ash pit B, which extends through the several casings, being closed on the outside by a door *a*. The bottom of the fire pot is formed by a grate *b*, which turns on an axle *c*, and this axle extends to the outside of the outer casing, so that said grate can be turned up by means of a suitable handle: the fuel is introduced to the fire pot through a passage *d*, which is closed by a door *e*.

Claim.—The arrangement of the fire pot A, ash pit B, sloping topped heater C, and escape pipe *g*, with the radiator D, air flues E E, and cold air casing F, as and for the purpose shown and described.

No. 29,984.—ARTHUR MAGINNIS, of Philadelphia, Pa.—*Improved Method of Ventilating Hats.*—Patent dated September 11, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Providing the hat with a recess at the junction of the brim with the body, and filling said recess with a perforated India rubber tube, the tube being covered by a perforated sweat leather, substantially as and for the purpose fully specified.

No. 29,985.—BERNHARD MERTZ, of Burlington, Iowa.—*Improvement in Harvesting Machines.*—Patent dated September 11, 1860.—This invention consists in hinging the front end of the tongue to the back of the machine by means of a joint, in combination with a universal joint, toothed arc and pawl, for the purpose of throwing the machine in an oblique position in relation to the guide wheel, whenever the operator desires to turn the machine.

Claim.—Hinging the front end of the tongue N¹ to the back of the machine by means of a joint O¹, in combination with the universal joint K¹ L¹ M¹, toothed arc Q¹, and pawl P¹, substantially as and for the purposes set forth.

No. 29,986.—S. H. MILLER, of Hanoverton, Ohio.—*Improvement in Governors for Steam Engines.*—Patent dated September 11, 1860.—This invention consists in the balancing bar and springs, in combination with a governor; also, in the arrangement of a sliding top collar, linked arms and rods, and governor balls, in combination with a balancing bar and springs.

The inventor says: I *claim*, first, the balancing bar I, and springs J J, in combination with a governor, substantially as and for the purposes set forth.

Second. The arranging of a sliding top collar B, linked arms C D, and rods E, and governor balls F, in combination with a balancing bar I, and springs J, substantially as and for the purposes set forth.

No. 29,987.—C. D. OBER and S. M. OBER, of Morrisville, Vt.—*Improved Washing Machine.*—Patent dated September 11, 1860.—This invention consists in the arrangement of the different parts.

Claim.—The arrangement of rubber R, constructed as described, with the corrugated board C, yielding roller G, dogs *r*, standards E E, shafts D and I, arms *m n* and *e*, and rods *p* and *f*, as and for the purposes set forth.

No. 29,988.—J. J. PARKER, of Marietta, Ohio.—*Improved Apple Parer, Corer, and Slicer.*—Patent dated September 11, 1860.—This invention consists in improvements in the apple machine, patented by this inventor July 6, 1858, which relate to the construction of the

adjustable head or knife stock, and the addition of a slicing knife for slicing the apples after passing the quartering blades.

The inventor says: I *claim*, first, the combination, with paring knife S, of the movable guide K, in the manner and for the purposes specified

Second. The combination, with the knife S, of the trough T, as and for the purpose specified.

Third. The slicing knife N, arranged and operating as described.

No. 29,989.—HENRY PEASE, of Brockport, N. Y.—*Improvement in Pumps*.—Patent dated September 11, 1860.—This invention consists in the improved mode of constructing the cylinder E, pistons F, bridges R, and governing passage T.

Claim.—The combination of the cylinder E, wings *b b*, supports *d d*, bevelled pistons F, graduated grooves *n o*, and governing passage T; the whole being constructed, arranged, and operated in the manner and for the purpose set forth.

No. 29,990.—CHARLES PERLEY, of New York, N. Y.—*Improved Vertical Ship's Windlass*.—Patent dated September 11, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement of the brake sockets *m n*, pawls 1 2, and wheels *d f g* and *l*, substantially as specified, whereby the shaft *a* can be rotated by the double brakes in either direction, as set forth.

Second. I claim the sleeve *t*, and heaver *q*, arranged in the manner and for the purposes specified.

Third. I claim the heavers *q* and *r*, fitted on a vertical shaft, and arranged substantially as specified, so that either or both heavers can be connected to, or disconnected from, said shaft, and thereby allow for raising or giving out either or both chain cables, or using the said shaft for a capstan, independent of the chain heavers, as set forth.

Fourth. I claim the vertical guard *s*, and flange 5, constructed and arranged as specified, to separate and guide the respective chains and keep them in place, as set forth.

No. 29,991.—AUGUSTUS PRUYN, of Albany, N. Y.—*Improvement in Wood Saws*.—Patent dated September 11, 1860.—This invention consists in having the outer end piece of the frame formed of metal, with a socket at its upper end, in which one end of a bar is fitted, the opposite end of the bar being provided with a screw, which is fitted within a recess at the centre of the inner end piece of the frame, and provided with a nut, the upper ends of the two end pieces being connected by a rod.

Claim.—The arrangement of the short end piece B, long end piece C, straining bar D, and rod F, substantially as shown, to form a frame for the saw A, and an improved article of manufacture, for the purposes specified.

No. 29,992.—WILLIAM RANKIN, of Richmond, Va.—*Improved Machine for Planing Mouldings*.—Patent dated September 11, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the skewed feed rolls and adjustable guides for guiding or directing the stick in a straight or curved line as it passes the cutters, substantially as described.

No. 29,993.—JOSEPH RAUB, of Highland, Pa.—*Improved Hoop Sawing Machine*.—Patent dated September 11, 1860.—This invention relates to certain improvements in machines for sawing hoops from poles, so that two hoops may be sawed from a pole at one operation, and may be fed both ways to the saw.

The inventor says: I *claim*, first, the conical feed rollers actuated by levers *G G G¹ G¹* and rods *b b*, in combination with the pressure rollers *N N¹*, arranged, combined, and operating substantially in the manner set forth.

Second. The levers *D D*, connecting rods *R R¹*, levers *E¹ E²*, connecting rod K, with the pressure roller rods *L L*, in combination, as and for the purpose set forth.

Third. The gauge roller *e¹ e¹*, in combination with the saws *e*, for the purpose of keeping the sawed work an even thickness throughout, as set forth.

No. 29,994.—ALFRED A. RAYMOND, of Salem, Mass.—*Improvement in Treadle Connection for Machinery*.—Patent dated September 11, 1860.—This invention consists in a novel connection of a spring, a rocking bar, a lever, and two connecting rods, for transmitting motion from a treadle to its crank.

Claim.—The combination with the treadle and crank pin of the rod E, rocking bar or lever D, spring G, and rod F, the whole applied and operating substantially as and for the purpose set forth.

No. 29,995.—WILLIAM RICE, of Philadelphia, Pa.—*Improvement in Bomb Shells*.—Patent dated September 11, 1860.—This invention consists in charging an oblong or spherical shell with a system of partially severed rings or strips of cast iron arranged within the shell round a chamber containing powder and adapted to each other.

Claim.—Charging a shell with a series of partially severed metallic rings or strips, arranged substantially as and for the purpose set forth.

No. 29,996.—WILLIAM ROBINSON, of Augusta, Ga.—*Improved Machine for Jointing Staves*. Patent dated September 11, 1860.—This invention consists in the combination of devices.

The inventor says: I *claim* the combination of the bed B with the carriage A and cutter shafts I I, the whole constructed, arranged, and operating substantially as and for the purposes set forth.

I also claim, in combination with the foregoing, the pressure roller c^1 , arranged and operating as and for the purpose specified.

No. 29,997.—WILLIAM ROBINSON, of Augusta, Ga.—*Improved Machine for Riving and Dressing Staves*.—Patent dated September 11, 1860.—This invention consists in the combination of devices for cutting and dressing staves.

Claim.—The laterally adjustable dogging carriage, in combination with the reciprocating bed B, carrying the riving knife E, and the arrangement of these parts with the dressing mechanism, substantially as set forth.

No. 29,998.—BERNARD T. ROE, of Nebraska City, Nebr.—*Improvement in Tanning Mills*. Patent dated September 11, 1860.—This invention consists in the combination and arrangement of a toothed scouring cylinder, a toothed concave and a smooth concave, apertures being between the two concaves.

Claim.—The combination and arrangement of a toothed scouring cylinder H, a toothed concave a c , and a smooth concave b , with apertures i and x between the two concaves, substantially as and for the purpose set forth.

No. 29,999.—BENJAMIN F. RONEY, of Philadelphia, Pa.—*Improvement in Harvester Cutters*. Patent dated September 11, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the upper knives C, so connected to the cutter beam that they can tilt laterally to a limited extent, and having the rods J and J^1 , or their equivalents, arranged in respect to the cutting edges of the said upper knives, as set forth, in combination with the lower reciprocating knives I, for the purpose specified.

I also claim the peculiar arrangement of the vibrating upper knives C and their rods J and J^1 in respect to the cutter bar G and guard finger B, whereby an open space is afforded for allowing the vibrating rods to discharge the clogged grain or grass from the cutters, as set forth.

No. 30,000.—WILLIAM H. SEYMOUR and LOTHROP SEYMOUR, of Weymouth, Ohio.—*Improvement in Cultivators*.—Patent dated September 11, 1860.—This invention relates to the special arrangement of the swinging or adjustable frames in combination with the hinged arms and adjustable teeth.

Claim.—The special arrangement of the swinging or adjustable frames Q in combination with the hinged arms M N and adjustable teeth, when constructed and operating as described.

No. 30,001.—WILLIAM SHAFER, of Ripon, Wis.—*Improved Washing Machine*.—Patent dated September 11, 1860.—This invention consists in combining with a curved and yielding washboard, arranged within the washbox or tub, which is of a quadrangular shape, a vibrating rubber with a rolling surface, which is made to act upon the surface of the washboard, or upon the clothes placed thereon, with a rolling and squeezing pressure instead of a rubbing pressure.

Claim.—The combination of spur rods C C, concave washboard B, buttons c c , and vibrating rubber, composed of rollers g g , arranged and operating conjointly as and for the purposes set forth.

No. 30,002.—HENRY W. SHIPLEY, of Mount Vernon, Ohio.—*Improvement in Smut Machines*.—Patent dated September 11, 1860.—A is a cone-like cylinder, concave above and horizontal beneath, attached to the shaft N, with which it revolves. B B are beaters formed of iron rods, bent at right angles at the ends, and driven into the inclined sides of the cylinder A. Z Z represent the same form of beaters driven into the inclined side of the cylinder. C C represents a case, which incloses the parts A B Z.

Claim.—The concave cone-like cylinder A A, the corresponding shaped case C C, and beaters B Z, in combination, and operating as described.

No. 30,003.—CHARLES SMITH, of Knoxville, Texas.—*Improvement in Cotton Cleaners.*—Patent dated September 11, 1860.—The claim and engravings explain the nature of this improvement.

The inventor says: I *claim*, first, the employment of a conical shaft C, provided with spiral fans *d d* at one of its ends, and with teeth *e* set in spiral lines round its circumference and along the remainder of its length, in combination with a cylinder B, surrounding the same, constructed partly of wire work and partly of sheet metal, and an exterior case A, which is constructed with an air supply passage G and a cotton discharge passage J y Z, substantially as and for the purposes set forth.

Second. The combination of the passage H, in the circumference and near the discharge end of the interior wire gauze cylinder, with the slotted hinge valve *f*, substantially as and for the purposes set forth.

No. 30,004.—AMOS P. SPALDING and ELISHA PIERCE, of Westminster, Mass.—*Improvement in Machines for Bending Wood.*—Patent dated September 11, 1860.—This invention consists in the arrangement and combination of vises, or their equivalents, with the bearing strip of the mechanism for bending and holding the wood.

Claim.—The combination and arrangement of the vises U U, or their equivalents, with the bearing strip T of the mechanism, for holding and bending the wood, as specified.

No. 30,005.—STEPHEN STEWART, of Philadelphia, Pa.—*Improvement in Closing Doors and Gates.*—Patent dated September 11, 1860.—A is the door frame, and B is the door which is hung in the same by the hinges *a a*. C is a lever for closing the door. It is hung on the fulcrum *b*, in the plate D, which is attached to the door frame A. The cord E is attached at one end to the short arm of the lever C, and at its other end to the upper end of the carrier F, which is fastened to the door B by means of the screw *c*. The cord E passes over the grooved pulleys G G, which are placed at right angles to each other in the openings *d d* of the supporting piece H, is made fast to the frame A by means of the screws *e e*.

Claim.—The combination and arrangement of the lever C, with the cord E, pulleys G G, and carrier F, or their equivalents, and the door B, substantially as and for the purpose set forth.

No. 30,006.—THOMAS STEWART, of Pittsburgh, Pa.—*Improvement in Safety Guards for Harvesters.*—Patent dated September 11, 1860.—This invention has for its object the preventing of the throwing of the cars from the track by obstructions or other causes, as well as the sustaining of the cars in case of the breaking of a wheel or axle; also, in a novel and improved brake for breaking up the cars by a moderate of power.

Claim.—The arrangement of the central roller G, rail B, pendants *h*, and hooks *i*, with the wheels E, rails A, pendants H H, springs *l l*, rods I, bars F F, rollers *o o f**, lever J, and rod K, all as shown and described.

No. 30,007.—J. C. STODDARD, of Worcester, Mass.—*Improvement in Horse Rakes.*—Patent dated September 11, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Operating the rake so as to raise or hold it in a depressed state, by means of the friction wheel, hung in movable bearings, and between the rim or flange of the driving wheel and a friction roller, essentially as set forth.

No. 30,008.—LEVI F. STRAIGHT, of Fairbury, Ill.—*Improvement in Corn Planters.*—Patent dated September 11, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination and arrangement of the levers I I¹ and K¹ K², constructed and operating in the manner and for the purposes set forth.

Second. The combination of the removable valve E, forked lever F, and slides H H¹, arranged and operating substantially as and for the purposes set forth.

Third. The combination of the internal adjustable slide *h*, with the vertical hollow barbed seeding slide H or H¹, constructed, arranged, and operating, in connection with the conducting tube D, in the manner and for the purposes set forth.

No. 30,009.—JOSEPH W. STRANGE, of Bangor, Me.—*Improvement in Spring Dividers.*—Patent dated September 11, 1860.—This invention consists in a peculiar arrangement and combination of the inclined plane and screw, relatively to the other parts of the dividers and calipers, and each to the other, by which the legs of the dividers and calipers are relatively contracted or allowed to diverge.

Claim.—The combination and arrangement of the sliding yoke Y, and the screw S, when applied to calipers and dividers substantially as and for the purposes set forth.

No. 30,010.—DANIEL STROCK, of Chambersburg, Pa.—*Improvement in Horse Rakes.*—Patent dated September 11, 1860.—This improvement consists in arranging the rake head and straining frame in such relation to each other that the rake head shall occupy a position near the centre of the straining frame, the two being united together and rotating upon the same axis.

Claim.—The combination of the rake head and straining frame, when arranged and operating substantially as described, for the purpose set forth.

No. 30,011.—ALPHEUS C. TIBBETTS, of Rockland, Me.—*Improvement in Fore and Aft Sails of Vessels.*—Patent dated September 11, 1860.—A denotes the bowsprit, B a boom, whose forward end should be so applied to the fore end of the bowsprit as to enable the boom to swing to the leeward. For this purpose a pin *a*, hung to a staple *b*, (fixed to the end of the boom,) passes downward into a hole made in the bowsprit, the said pin serving to maintain the nose of the boom in its proper position, with respect to that of the bowsprit, while the boom is swung laterally. On the opposite sides of the boom are two projecting rails *c c*, which extend longitudinally along it, and support a sail carriage or slider C, the latter being constructed partly of three bars *d d¹ d*, connected together by arched bars *e*.

Claim.—The described application or arrangement of the carriage C, and swinging boom B, together with the bowsprit A; the whole being to operate in the manner and for the purpose substantially as specified.

No. 30,012.—DWIGHT TRACY, of Worcester, Mass.—*Improvement in Sewing Machines.*—Patent dated September 11, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination, with the perforating eye pointed needle of a sewing machine, of the thread clamping device, constructed and operating substantially as described, and the independent thread drawing device, constructed and operating substantially as shown and described.

Second. The employment, within the shuttle of a sewing machine, of a take-off apparatus, operating to take off from the bobbin a quantity of thread, to be held in reserve between the bobbin and the point where the thread leaves the shuttle until it is required to be delivered from the shuttle, and then to let out the quantity necessary to form a stitch without drawing from the bobbin, substantially in the manner described.

Third. The combination, in the shuttle of a sewing machine, of the take-off apparatus described, with the clamping piece, constructed as described, and operating to hold the thread at the time of the tightening of the stitch as specified.

Fourth. The employment, in combination with a needle and shuttle, of an elastic pointed fork, constructed and applied and operating to extend and spread the loops of the shuttle thread, which are drawn through the cloth, substantially as set forth.

No. 30,013.—JOHN G. TREADWELL, of Albany, N. Y.—*Improvement in Ranges and Stoves.*—Patent dated September 11, 1860.—A represents the body of a stove or range, in which are arranged two ovens D and E. The ovens are distinct from each other, being divided by means of a fire box and flues. B shows the ash pit, and *a* represents draft flues leading to the fire box H. The flues enter into the ash pit through the inverted hoppers F F.

Claim.—The arrangement of the fire box, the draft flue *a*, and the hoppers F F, with the ovens D and E, and with the hot air flues around and between the hoppers, substantially as and for the purpose specified.

No. 30,014.—LEVI B. TYNG, of Lowell, Mass.—*Improvement in Railroad Joints.*—Patent dated September 11, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The method described of constructing rail joints for railroads, that is to say, I claim the bar I, connected to side splices A, in combination with rails F and plates *a b c*, substantially as described and for the purposes fully set forth.

No. 30,015.—A. L. O. WALL, GEORGE ROBERTS, and M. S. CARTTER, of Decatur, Ill.—*Improvement in Portable Capstans for Mole Ploughs.*—Patent dated September 11, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim*, first, the combination of the spools G H, and shaft F, with the system of cords *d¹ d² d⁵*, levers D, and pulleys *d³*, when the whole are arranged together for joint operation, substantially in the manner described, for the purpose set forth.

Second. The construction of the front axle C, with a swivelling bearing *c*, in combination with the semi-circle *c²*, and turning latch *c¹*, when arranged together for joint operation, substantially as and for the purposes set forth.

Third. Supporting the wheels in adjustable arms *b*, when said arms are arranged and operate, in relation to the bent axles, substantially as and for the purpose described.

No. 30,016.—JONATHAN WALTON, of Brooklyn, N. Y.—*Improved Door Latch*.—Patent dated September 11, 1860.—This invention consists in providing the nosing or face plate of a door latch with a slot, said slot serving as a passage for the latch of the door. At the base of said slot is constructed an inclined plane B; upon this inclined plane the ball C traverses when acted upon by the latch of the door.

Claim.—The combination and arrangement of the slot A, the inclined plane B, and ball C, substantially as and for the purpose described.

No. 30,017.—S. M. WIRTS, of Hudson, Mich.—*Improvement in Grain Separators*.—Patent dated September 11, 1860.—The shoe B is slightly inclined, and is provided with the usual number of screens; C is a hopper placed on the upper part of the case, and provided with sides *c c*; on the shoe, near its upper end, a transverse bar *d* is placed, and to this bar a semi-elliptic, or other proper spring D is attached, on which the bottom E of the hopper is placed.

Claim.—The arrangement of the spring D, and bottom E, with the hopper C, and shoe B, as and for the purpose shown and described.

No. 30,018.—W. A. WOOD, of Hoosick Falls, N. Y.—*Improvement in Raking Apparatus for Harvesters*.—Patent dated September 11, 1860.—The claim and engravings explain the nature of this invention.

Claim.—In combination with an automatic rake, a travelling belt for carrying the front, and a turning guide for directing the shank of the rake, when the belt moves with the rake horizontally over the platform, substantially as described.

No. 30,019.—G. W. N. YOST, of Yellow Springs, Ohio.—*Improved Link for Chains*.—Patent dated September 11, 1860.—A is a chain link with a portion of the side cut out, and having a thread *a* cut on one end, and a head or shoulder *b* upset on the other; B is a swivel forming the connection between the ends of the links; *c* is a conical hole in the swivel; *d* is a female screw in the swivel, and in line with the openings *c*; this screw is intended to act as the nut for the screw *a*, on the end of the link A.

Claim.—The combination and arrangement of the open link A, and swivel B, constructed and operating substantially as described and for the purposes set forth.

No. 30,020.—AMOS CHASE, of North Weare, N. H., assignor to NATHAN C. PAGE, of said North Weare.—*Improved School Desk*.—Patent dated September 11, 1860.—This invention consists in a peculiar arrangement of the slide for the desk and seat, whereby the desk seat may be adjusted to the desired height and retained firmly in proper position, and a back permitted to be used with the seat.

Claim.—The arrangement of the desk A, and sliding bar C, with the bar E, bolt F, and sockets B D, as and for the purpose shown and described.

No. 30,021.—HENRY BURROWS, of Georgetown, D. C., assignor to himself, and E. W. WOODRUFF, of Washington, D. C.—*Improvement in Fences*.—Patent dated September 11, 1860.—The claim and engravings explain the nature of the invention.

Claim.—Adjusting the wires around the posts of a portable folding fence, in the manner described, so that the requisite degree of tension is produced by prolonging the sections, and the wires are held firmly in their places, as shown and set forth, for the purposes specified.

No. 30,022.—L. B. BATCHELLER, of Rochester, N. Y., assignor to himself and R. B. HURD, of said Rochester.—*Improved Chair Seat*.—Patent dated September 11, 1860.—This invention consists in the employment of wire fabrics woven in the piece, from which they are cut of the desired form and size.

Claim.—Constructing chair seats from wire cloth, arranged substantially in the manner and for the purposes set forth.

No. 30,023.—LUCIUS M. GILMORE, of Janesville, Wis., assignor to himself and J. M. MAY, of said Janesville.—*Improvement in Rock Drilling Machines*.—Patent dated September 11, 1860.—This invention relates to certain improvements in drills for drilling or dressing stone, and adapting the same in boring great depths in rock for water, or for analogous uses.

The inventor says: I *claim*, first, constructing and combining members G H and I, of a drill, and rings *d d*, or their equivalent, when arranged substantially as described and for the purposes set forth.

Second. The devices, consisting of plates *e e*, or their equivalent, in combination with members G H and I, and rings *d d*, when used for adjusting the diameter of a drill, substantially as described.

Third. The use of the elastic strap E, and cams B B, when arranged for operating a drill, and for analogous purposes, substantially as described.

No. 30,024.—CHARLES B. HUTCHINSON, of Auburn, N. Y., assignor to R. A. HUTCHINSON, of said Auburn.—*Improved Barrel Head Machine*.—Patent dated September 11, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the cast iron frame A, supporting all the working parts, and constructed substantially as and for the purposes specified.

Second. I claim the swing crane or pier C, the lever *w*, the locking bar F, the centre points N N, the form of the cutters O O, and their mode of attachment in the cutter head *h*, in combination with the projections M M, and their indentations K, substantially as described, and for the uses and purposes set forth.

No. 30,025.—Z. McDANIEL, of Bowling Green, Ky., assignor to himself and J. W. JEWELL, of said Bowling Green.—*Improvement in Hanging Mill Stones*.—Patent dated September 11, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Providing the balance iron A with a recess *a* larger in diameter than the upper part of the spindle, and having a plate *b*, which rests on the spindle, fitted in the recess, as and for the purpose set forth.

No. 30,026.—JAMES MOLYNEUX, of Bordentown, N. J., assignor to the BORDENTOWN MACHINE Co.—*Improvement in Blocks for Forming Tiles*.—Patent dated September 11, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Constructing the block for forming tiles and other clay forms in two halves A and B, and combining therewith the bar C, or any other equivalent device, by which the block may be expanded or contracted, for the purpose specified.

No. 30,027.—H. B. NASH, of Sandy Hill, N. Y., assignor to A. B. KING, of Troy, N. Y.—*Improved Mitre Box*.—Patent dated September 11, 1860.—The upright portion of each of the arms D D¹ is made of two parts *f* and *g*, which are screwed together by screw pivots *h*, thus allowing the upper parts *g* to turn freely, and to be set to any desired angle.

Claim.—The arrangement of the sliding, oscillating, adjustable arms *g g*, and parts *ff*, with the sliding pivoted arms D D¹, and adjustable guide gates K K, as and for the purpose shown and described.

No. 30,028.—GEORGE W. PITTOCK, of Union Mills, N. Y., assignor to ISAAC BROWN, of said Union Mills, and JOSEPH BOWMAN, of Troy, N. Y.—*Improvement in Griddles*.—Patent dated September 11, 1860.—This invention consists in so constructing and arranging arms or cross pieces, in connection with a tube or circular ring, as to form a centre or axis, all of which shall contract and expand in equal proportion to the expansion and contraction of the tube or circular ring, and allow any rotating top to easily revolve thereon, as well as to prevent the breaking of either of the said arms or cross pieces, or any part of the ring, as otherwise would be the case, by reason of an unequal contraction and expansion; also, to prevent friction.

Claim.—The combination of the arms or cross pieces A with the inner ring R R, and the tube or ring B, as and for the purposes shown and described.

No. 30,029.—A. T. UNDERHILL, of New York, N. Y., assignor to C. R. UNDERHILL, of Newcastle, N. Y.—*Improvement in Evening the Edges of Shirting*.—Patent dated September 11, 1860.—In this invention the inventor employs suitable strips of wood, with projecting pins, placed at desirable intervals apart, extending the entire length of the strips; upon these pins the fabric is to be hung, which support it until the required number of folds are made. When this is done, the several thicknesses are clamped together with suitable clamps, and the shirting in this state is ready for the cutter's table.

Claim.—The method of evening shirting herein shown and described.

No. 30,030.—WALLACE WELLS, of New York, N. Y., assignor to himself and SAMUEL B. WELLS, of said New York.—*Improvement in Steam Engines*.—Patent dated September 11, 1860.—The claim and engravings explain the nature of this improvement.

Claim.—The combination of the pistons with the connecting rods and crank arms, or their equivalents, arranged substantially as described.

No. 30,031.—THEODORE S. WASHBURN, of Rochester, N. Y., assignor to EZRA B. BOOTH, of said Rochester.—*Improvement in Sewing Machines*.—Patent dated September 11, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the spur *m*, on the cam *F*, with the abrupt notch or recess *r*, in the looper *H*, when so arranged as both to allow the looper to more speedily enter the loop of the needle thread, and to prevent any reverse motion of the parts at the most critical moment in forming the stitch, substantially as specified.

No. 30,032.—HENRY A. ALDEN, of Matteawan, N. Y., assignor to the NEW YORK RUBBER Co.—*Improvement in Water Proof Hose.*—Patent dated September 18, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Making flexible tubing or hose by first lapping around a mandrel, or its equivalent, a strip or strips of flexible material lined or coated on one or both sides with an India rubber or other cementing substance, and then drawing on or over the same a similarly coated close or woven tube, substantially as described.

No. 30,033.—ETHAN ALLEN, of Worcester, Mass.—*Improvement in Breech Loading Fire Arms.*—Patent dated September 18, 1860.—This invention refers to that class of breech loading fire arms in which a metal cartridge is inserted into the rear end of the barrel, and is covered by a sliding breech piece, and consists of a device for ejecting the empty metal cartridge case from the barrel, after firing, by the operation of the parts which move the sliding breech pin.

Claim.—In combination with the lever *E* that moves the sliding breech, the discharger *F*, constructed and operating in the manner substantially as set forth.

No. 30,034.—JAMES M. ALLEN, of Fredericktown, Ohio.—*Improvement in Boots and Shoes.* Patent dated September 18, 1860.—The claim and engravings explain the nature of this invention.

Claim.—As a new article of manufacture, a boot or shoe having an India rubber or gutta percha tip, and an India rubber or gutta percha outsole, made in one piece, and united thereto as described, expressly disclaiming the two things, when separately used or not upon the same shoe, or when made in separate pieces.

No. 30,035.—E. G. F. ARNDT, of Rondout, N. Y.—*Improved Portable Door Lock.*—Patent dated September 18, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement of the lock proper, the bolt and the parts connected immediately therewith, with the hasps, whereby the portable door lock may be used either as an inside or outside lock.

Second. In combination with the lock, constructed substantially as described, I claim the key made up of the parts, and susceptible of being operated, as set forth.

No. 30,036.—W. B. ATKINSON, of Plymouth, Ill.—*Improvement in Mole Ploughs.*—Patent dated September 18, 1860.—This invention consists in arranging the sharp pointed shoe or mole with a rounded and narrow bottom, and with an inclined top running up to the flanged back, and in such a manner that the drain formed by the shoe is provided with two shoulders ready to receive the drain boards, and that the sides of the drain are left comparatively impressed; and also, in the arrangement on the back end of the shoe, of a clamp to be operated by a screw rod from the top of the standard in such a manner that the drain boards can be secured in the shoe, and down into the drain, as the plough passes along through the ground.

The inventor says: I *claim*, first, the combination of the V-shaped sharp pointed mole *E*, with the side flange *F*, constructed and operating in the manner and for the purpose set forth.

Second. The arrangement of the clamp *K*, in combination with the shoe *E*, constructed and operating substantially as and for the purpose specified.

No. 30,037.—AUSTIN AVERY, of South Windham, Conn.—*Improved Mode of Attaching Horses to Vehicles.*—Patent dated September 18, 1860.—This invention consists in applying, to the ends of short shafts of any one horse vehicle, metal ferules, with T-heads on their ends that are round on the bottom and flat on the top, and attaching these shafts to the ends of metal tubes by a slotted eye and spring bolt or latch joint, which tubes are attached by a swivel and spring bar to the frame straps, and to the belly band and breeching straps in such a manner that by detaching the shafts the horse will be free to walk from the vehicle.

Claim.—The metal tubular portion *A*, constructed substantially as described, and furnished with a spring latch *b*, and slotted hooks *a a*, for receiving the T-heads of the shafts and loops *E*, for receiving the tug and belly band straps, as described.

No. 30,038.—JABEZ K. BABCOCK, of Canandaigua, N. Y.—*Improvement in Wind Mills.*—Patent dated September 18, 1860.—This invention consists in combining with a wind wheel

a rotary hollow air tight tower, that serves as the receiver of air which may be compressed by a suitable pump connected to the wind wheel, said tower being provided with a hollow tubular centre to draw off the air which may have been compressed in the same.

Claim.—The arrangement of the hollow rotary tower C, with a hollow centre *c*, in combination with the wind wheel A, constructed and operating substantially as and for the purpose described.

No. 30,039.—ABEL H. BARTLETT, of Spuyten Duyvil, N. Y.—*Improvement in Hot Air Furnaces.*—Patent dated September 18, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim the employment of radiators *e*, that are each made with two separate straight legs, having curved extremities, and an arched shoulder with a horizontal neck *e*¹ projecting therefrom, as shown, so that the said radiators may be cast in one piece of metal, and so that when the curved extremities are laid one upon the other a continuous fire or radiator of vertical serpentine form is made, the necks *e*¹ serving to facilitate the cleaning of the radiators, besides supporting and strengthening the pile by being laid in the brick work, all as set forth.

I also claim the special arrangement, as shown and described, of the plates *m m*, dome plate *d*, fire pot *b*, radiators *e*, and flues *f g h*, for the purpose specified.

No. 30,040.—MELLEN BATTEL, of Albany, N. Y.—*Improvement in Furnaces.*—Patent dated September 18, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A coking or drying cylinder, or box, hung on a hollow shaft in the fire box of a boiler, or other furnace, over or above the grate, the shaft being perforated with holes, to allow the atmosphere to pass in by a cock or valve, to commingle with the coal and gases as the cylinder revolves, and necessary to pass from the hollow shaft through the arms to the rim of the cylinder, and then pass out in jets, these cylinders to be revolved at pleasure, substantially as set forth for the purposes described and made to operate.

No. 30,041.—H. BAGLEY, of Tipton, Iowa.—*Improvement in Mole Ploughs.*—Patent dated September 18, 1860.—The object of this invention is to obtain a simple and inexpensive means for adjusting the mole tooth while in or out of the ground, so that the underground channel may be made deeper or shallower, as occasion requires, or so that the tooth may be made to enter into or run out of the ground whenever necessary.

Claim.—The arrangement of the swivel or oscillating bar H, upright G, adjusting screw rod J, and nut K, with the adjustable stock D, beam A, screw L, and mole tooth E, as and for the purpose shown and described.

No. 30,042.—WILLIAM BEACH, of Philadelphia, Pa.—*Improvement in Rammers for Street Paving.*—Patent dated September 18, 1860.—This invention consists in the construction and application of a balanced revolving beater to a locomotive truck, whereby cobble or other stones, after being set in the usual manner for paving streets, can be rammed down to the compactness, solidity, and evenness which are required to produce a well paved road way.

The inventor says: I claim, first, the revolving beater A, the same being constructed and applied to operate substantially in the manner and for the purpose set forth and described.

Second. I also claim, in combination with the driving wheels *l l* of the truck B, the combined arrangement of the differential mechanism *t t*¹, the worm wheel *u*, and shaft *u*¹, the same being made to operate together, substantially in the manner and for the purpose set forth and described.

No. 30,043.—GEORGE BENJAMIN, of Avoca, N. Y.—*Improved Lifting Jack.*—Patent dated September 18, 1860.—E F are clasps that extend around the lever. They are provided each with a bearing at the under side that extends outward into the fulcrum of the plates C C¹. These clasps must be so made as to pass between the plates C C¹, and each clasp is provided with a handle.

Claim.—The combination and arrangement of a lifting apparatus, consisting of uprights B and B, fulcrum plates C and C, and clasps E and F, provided with latches G and H, substantially as and for the purpose described.

No. 30,044.—ALFRED BRADY, of New York, N. Y.—*Improvement in Casting Pipe.*—Patent dated September 18, 1860.—This invention consists in applying to the ends of the hollow core bar, either inside or outside of the flask, suitable levers and one or more bars extending from the end of one lever to that of the other, by which means the levers may be made to act upon the core bar so as to prevent it from springing while the pipe is cast; said arms or levers and brace rod are to be arranged and applied to the ends of the core bar.

Claim.—The application of a counteracting force to the ends of the core bar B, in the casting of pipes or tubular work, by means substantially as described and for the purposes set forth.

No. 30,045.—CHARLES F. BROWN, of Warren, R. I.—*Improvement in Fire Arms.*—Patent dated September 18, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The wheel J, applied in combination with the cam K, or its equivalent, for the purpose of producing the necessary operation of the said cam, or equivalent, to effect the rapidly repeated firing of a piece of ordnance, by the act of its movement, from place to place, substantially as specified.

No. 30,046.—H. BUCKINS, of Canton, Ohio, assignor to himself and SAMUEL PETREE, of said Canton.—*Improved Milk Straining Pails.*—Patent dated September 18, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination, with the pail A, and spout or channel E, of the removable and sliding strainer G, arranged to work up and down on the under side of the guard or top piece D, as shown and described and for the purposes stated.

No. 30,047.—MOSES BUGHER, of New Philadelphia, Ohio.—*Improvement in Grain Separators.*—Patent dated September 18, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement of the double series of tossing rakes I I¹, in combination with the hinged hopper bottom, or delivering board E, curved rods j, and shoe J, constructed and operating substantially as and for the purpose set forth.

Second. The arrangement of the rear extending teeth g, and arms n, extending from the oscillating rake head F, substantially as described, for the purpose of imparting the desired motion to the delivering board and to the shoe.

Third. The arrangement of the tossing rakes I I¹, shoe J, double conical revolving sieve L, and an elevator O, substantially in the manner and for the purpose specified.

No. 30,048.—CHARLES H. COOPER, New York, N. Y.—*Improved Mode of Hanging Torch Lamps.*—Patent dated September 18, 1860.—This invention consists in using infusible metal and riveted pivots to attach the ring to the socket arms.

Claim.—The infusible metal, pivotted joint riveted inside and outside, in the manner and for the purposes set forth.

No. 30,049.—H. R. CRAMPTON, of Lockport, N. Y.—*Improved Bed Bottom Springs.*—Patent dated September 18, 1860.—This invention consists in constructing and arranging the several parts of the bed.

Claim.—The spring slats a a, the binders c c and s s, the end straps d d, the springs m m, and the bottom slats n n, the binders c c being hinged as represented, and the several parts constructed and arranged substantially in the manner and for the purpose specified.

No. 30,050.—AUGUSTIN J. DESPINOY, of Lille, France.—*Improvement in the Preparation of Medicinal Extracts.*—Patent dated September 18, 1860.—This invention is the production of a concentrated extract from the liver of fishes living in salt water.

Claim.—The new substance produced substantially in the manner described, the same being extracted from the mother liquid of the liver of the sea fish.

No. 30,051.—JACOB DRAKE, of New York, N. Y.—*Improvement in Tapping Water Pipes.*—Patent dated September 18, 1860.—This invention relates to that class of machines for tapping pipes, or other vessels containing fluids under pressure, wherein the drill acts on the pipe from within a chamber clamped to the pipe or other vessel for the purpose of preventing undue waste of the fluid when drilling, or when introducing the service cock.

The inventor says: I *claim*, first, the divisible chamber stuffing box and gland, in combination with the machine, substantially as described.

Second. The equilibrium passage and valves, in combination with the chamber and check valve, substantially as described.

No. 30,052.—MARTIN DREW, of Saint Paul, Minn.—*Improvement in Hames for Horse Collars.*—Patent dated September 18, 1860.—The claim and engravings explain the nature of this improvement.

Claim.—The combination of the extension hames produced by the slides B with the variable tug attachment, formed by the notched or bent staples e, as and for the purpose set forth.

No. 30,053.—H. F. DROTT, of Cumberland, Md.—*Improved Egg Beater*.—Patent dated September 18, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The employment of the gauze wire partition D, in connection with the cup A, and close fitting cover C, the eggs being forced or driven through the partition, substantially as and for the purpose specified.

No. 30,054.—LEWIS EVANS, of Morgantown, Va.—*Improvement in Moulds for Rifle Balls*.—Patent dated September 18, 1860.—This invention consists of two flasks of a bullet mould, and a die carrier, furnished with dies hinged together.

The inventor says: I *claim*, first, two flasks A B, of a bullet mould, and a die carrier J H, furnished with dies L, hinged together at C, substantially as and for the purposes set forth.

Second. The combination of a sliding cutter F, with the flasks A B, and die carrier J H, and dies L, substantially as and for the purposes set forth.

No. 30,055.—JAMES FARNAN, of Cleveland, Ohio.—*Improved Faucet*.—Patent dated September 18, 1860.—B is the cap or stuffing box which screws into the neck A, as seen at B¹. C is the stem which passes through the stuffing box, or cap B. At C upon this stem is a circular valve, which fits the valve seat C², situated above the valve C¹ in the cap B.

Claim.—The cap B, with its extension B², valve C¹, cup valve E, and the valve G, when these several parts are constructed, arranged, and operated substantially as and for the purpose set forth.

No. 30,056.—JACOB D. FELTHOUSEN, of Michigan City, Ind.—*Improvement in Hay and Straw Cutters*.—Patent dated September 18, 1860.—This invention consists in making the machine so as to feed itself at all times while in operation, without regard to the quantity of material to be cut, and regulating the length of the feed or cut, to any desired length, and also cutting the same of a uniform length during the will of the operator, which is done by means of the inside box A, with its movable lid B, having a lever C on the top, and operated by the rock shaft D, and regulated by the set screw F.

The inventor says: I *claim* the rock shaft D, in combination with the stirrup G, and set screw F, at the top of the gate, for the purposes substantially as set forth.

I also claim the spring pressure pad or holder H, with teeth on its lower side, inclining each way from the centre to the side of the box, in combination with the knives I I, substantially as described, and for the purposes indicated.

No. 30,057.—L. B. FLANDERS, of Cleveland, Ohio.—*Improvement in Marine Propulsion*.—Patent dated September 18, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: First, when two or more propellers are upon the same shaft, and rotated in the same direction, I *claim* arranging the blades of said propellers upon their respective shafts, so that the blades of the propeller nearest the bow shall be at a greater angle from the line of the shaft, and the blades of each propeller in the rear of it at a less angle from the line of the shaft, as set forth.

Second. I claim constructing the bearings of the propeller shaft, of tables or plates, attached to, and projecting from, the sides of the vessel, as described, so that said bearings constitute cut-water surfaces as well as supporting surfaces, as set forth.

Third. I claim operating the propeller shaft by toothed or bevelled wheels projecting through the sides of the vessels, and gearing into toothed or bevelled surfaces, encircling or upon a band around the propeller, as described.

No. 30,058.—WILLIAM FUZZARD, of Charlestown, Mass.—*Improvement in Manufacturing Sheets of Fibrous Material*.—Patent dated September 18, 1860.—The inventor says, for the purpose of manufacturing bats, "I employ what may be termed a press box, a heating chamber, or chambers, and feed rollers, arranged so that the substance, of which the bats are composed, is forced through the press box aforesaid, and formed by compression under heat and with any suitable cement, or glutinous substance, in paper bats or sheets."

Claim.—The taper press box B, provided with the heating chambers E E, one or more, in connection with the feed rollers C C, or their equivalents, for the purpose specified.

No. 30,059.—RICHARD J. GATLING, of Indianapolis, Ind.—*Improvement in Machine Gearing*.—Patent dated September 18, 1860.—The claim and engravings explain the nature of this improvement.

The inventor says: I *claim*, first, the arrangement of the fixed collar *a*, loose washer *c*, India rubber spring *d*, loose washer *e*, with the female screw *f*, and the male screw *f*¹, when used in combination with the cog wheel or pulley, as described, and operated, for the purpose set forth.

Second. I claim the enlarged hub or appendage E, of, and to, the wheel or pulley, with recess or cavity formed by the flanges g, in the same, for receiving the caps D, when constructed and arranged as described, and operated, for the purpose set forth.

No. 30,060.—L. S. GRAVES, of Rochester, N. Y.—*Improvement in Machines for Cutting Boot and Shoe Soles*.—Patent dated September 18, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim, first, the combination, with toggle levers *b b*, operated as set forth, of the bent lever H, cutter spindle *g*, and reciprocating block K¹, carrying the cutter, the lever J, and rack arm *j*¹, with wheel *i*, and its engaging pawl *k*; all arranged in a suitable relation to each other, and operating as set forth.

Second. The slotted cam drum D, slotted lever 3, and adjustable fulcrum screw 9, with the carriage 2, and block 7, movable in the carriage; all combined and arranged in the manner and for the purposes set forth.

Third. The manner of securing the cutter L to its holder N N, by screw rods or rod P, running lengthwise of the cutter, and blocks *p p*, with their pins *p*¹ *p*¹, arranged and combined with the slotted and grooved arms of the holder, substantially as set forth.

No. 30,061.—EMANUEL FERDINAND HAMANN, of Collikoon, N. H.—*Improved Barometer*.—Patent dated September 18, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A tube containing a column of mercury, so balanced or equilibrated that the atmospheric changes produce a greater extent of movement in said tube than the actual change in the altitude of the column of mercury, as set forth.

No. 30,062.—WILLIAM H. HEALD, of Baltimore, Md.—*Improvement in Apparatus for Tanning*.—Patent dated September 18, 1860.—The claim and engravings explain the nature of this invention.

Claim.—In combination with a tanning vat, a frame which can move vertically and also turn upon its journals or bearings, and to which the hides are suspended in a perpendicular position while in the tanning liquor, but which, when raised, will, together with the hides, tilt to an inclined or horizontal position, bringing the hides in a pile, substantially as described, and from whence they are readily removed and others attached thereto, as set forth.

No. 30,063.—R. HEMINGRAY, of Covington, Ky.—*Improvement in Moulds for Glass Jars*.—Patent dated September 18, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The mould, herein described, for moulding such jars as have an annular groove *h* surrounding the mouth of the jar, consisting of the parts D D having an angular projection *i*, for the purpose of forming the grooves *h* so hinged or connected with the parts A A of the mould as to open upward, while the parts A A subsequently open laterally, thus releasing the jar from the mould and permitting the same to be removed without injury, substantially as set forth.

No. 30,064.—M. HEMINWAY, of Watertown, Conn.—*Improvement in Swifts*.—Patent dated September 18, 1860.—The end of each spoke A is jointed to a hub or wheel G that is keyed to the shaft E, and between this hub G and the wheel D is interposed a coiled spring J attached to both wheel and hub in such a manner that it will force the arms out in a position nearly radial with the axis of the shaft E.

Claim.—The arrangement of the slotted arms A and wheel D with the hub G and spring J, as and for the purposes set forth and described.

No. 30,065.—JACOB F. HUNTER and F. W. GEISSENHAINER, of New York, N. Y.—*Improved Apparatus for Heating Apartments by Hot Water*.—Patent dated September 18, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We claim the combination and arrangement of the coils of pipe G and H, or their equivalent water heating surface, the casing A, and one or more annular heat radiating vessels, or one or more series of air heating pipes P, surrounding the same, forming a portable hot water stove, substantially of the character above set forth.

We also claim the employment of the cone K in the above described hot water stove, arranged relatively to the other parts of the same in the manner and for the purpose set forth.

No. 30,066.—JOSHUA JENKINS, of Boston, Mass.—*Improvement in Moulds for Glass Lamps*.—Patent dated September 18, 1860.—This invention consists of a mould, provided with a chamber so arranged alongside of the mouth of such mould as to enable a glass blower, while blowing a lamp fountain in the mould, to raise a concavo-convex projection alongside the

neck of the article so blown, such projection to be afterward opened or cut away, so as to form an auxiliary neck through which the lamp at any time may be supplied with fluid without the necessity of removing the wick tube cap from its neck.

Claim.—The improved lamp mould, as constructed, with the auxiliary neck chamber *b*, combined with the main matrix and arranged with respect to the mouth or sprue hole *a*, substantially as described

No. 30,067.—WILLIAM B. KERN, of Middlebourne, Va.—*Improvement in Straw Cutters.*—Patent dated September 18, 1860.—The material to be cut may be kept in place by the pressure of the spiral spring *x* on the block *y*, placed and secured so as to move up or down within the box *A*, by means of the guides fastened to the block *y*, which work in the grooves *z z*.

Claim.—The arrangement of the pressure block *v*, spreading spiral spring *x*, screw *L*, and frame *m*, combined with box *A*, feed shaft *D*, and cutting blades *S*, as and for the purpose set forth.

No. 30,068.—JEROME KIDDER, of New York, N. Y.—*Improved Electro-Magnetic Apparatus.* Patent dated September 18, 1860.—This invention consists in combining the ends of the two coils of fine wire contained within the helix of an electro-magnetic machine with a series of posts or studs, and with the helix of the electro-magnet, in such a manner that the currents produced by the electro-magnetic machine can be used either singly or in combinations, and also directly or alternately.

The inventor says: I *claim*, first, the arrangement of the wires 12 13 14 14 15 16 17 18 and 19 in combination with the electro-magnet *D* and with the cylinder *A*, constructed and operating substantially in the manner and for the purposes set forth.

Second. The arrangement of the wire 17 in combination with the wire 13, substantially in the manner and for the purpose set forth.

No. 30,069.—SALEM T. LAMB, of New Washington, Ind.—*Improved Clothes Frame.*—Patent dated September 18, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, in combination with the series of hinged and folding arms *D E*, the lever *H* extending out beyond the frame, for the purpose of raising or lowering said frame, substantially as described.

I also claim, in combination with the series of hinged and folding arms *D E*, the straining lever *I*, with its cord *m*, for straining up and holding in a strained up position the clothes lines, substantially as described.

I also claim, in combination with the groove *e*, on the spindle, the cut-away key *f*, in the pedestal, for the purpose of removing the spindle from the pedestal, when necessary, or for locking thereto, but always so that it may turn around, substantially as and for the purpose described.

I also claim so shaping and arranging the legs *B*, on the pedestal, that their upper ends shall lock or lap over each other and bear equally on each side of the pivot pin, to prevent their splitting, substantially as described.

No. 30,070.—JOEL LEE, of Galesburg, Ill.—*Improved Method of Raising Water from Wells, &c.*—Patent dated September 18, 1860.—This invention consists in constructing and arranging the several parts of the machine.

Claim.—The arrangement of the drum *H*, the cords or ropes *B B*, the equalizer *C*, the valve rod *D*, the valve *M*, the bumper *E*, and the weight *I*, with the curb *L* and the bucket *K*, provided with spout *A*, substantially as and for the purpose specified.

No. 30,071.—SAMUEL LEONARD, of Bridgewater, Mass.—*Improved Spoke Shave.*—Patent dated September 18, 1860.—This invention consists in an improved arrangement of the adjustable mouthpiece and its operative mechanism, with respect to the stock and cutter arranged in the stock.

Claim.—An improved arrangement of the adjustable mouthpiece and its operative mechanism, with respect to the stock and the cutter arranged in the stock, as specified.

No. 30,072.—DAVID S. MACKEY, of Batavia, N. Y.—*Improvement in Machines for Separating and Scouring Grain, &c.*—Patent dated September 18, 1860.—The curb *J* is fitted between two wings or annular plates *m*, which are grooved to receive the edges of the curb; on the upper ring *m* a stone *L* is placed; this stone *L* has bars *M* resting or bearing upon its upper surface, said bars extending entirely across the stone *L* and having screw bolts *n* passing through their ends, said bolts also passing through ears or bolts *o* attached to the wings *m m*.

The inventor says: I *claim* the arrangement of the suction blast spout *G*, with the air chamber *F*, spout *N*, fan box *B*, inclined spout *K* and box *H*, as and for the purposes shown and described

I also claim the arrangement of the stone L with the wings or annular plates *m m*, bolts *n*, curb J, and bars M, as and for the purposes shown and described.

No. 30,073.—WILLIAM H. LIVINGSTON, of New York, N. Y.—*Improvement in Wood Saw Frames*.—Patent dated September 18, 1860.—The object of this invention is to strengthen the cross piece of the saw frame, prevent said cross piece from bending laterally, or in a direction at right angles thereto, and also prevent the winding and racking of the saw frame.

Claim.—The combination of the screw rods E E, loops F F, or their equivalents, bar D, and frame C, applied to the saw frame A, as and for the purpose set forth.

No. 30,074.—W. W. MARSH, of Alton, Ill.—*Improvement in Grate Bars*.—Patent dated September 18, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The construction of revolving grate bars with alternate longitudinal grooves and pins, and a spiral transverse groove around each bar, by which the edges of the fins are divided into notches and projections spirally arranged, all as herein shown and described, for the purpose set forth.

No. 30,075.—WILLIAM G. MAUPIN and JOHN B. ROOKE, of Portsmouth, Va.—*Improved Ships' Air Ports*.—Patent dated September 18, 1860.—D is a circular frame or ring for closing the one half of the port. This frame, with its semi-circular glass plate, is placed behind the ring B and kept in close contact with it. Each circular frame B D has a central enlargement or eye E E¹, through which passes a stem G; one part of said stem is round and turns easily in the stationary eye E and the stationary eye E¹, and the other part is square and fits into a square hole in the eye E, so that by turning the stem this ring, with its glass, will turn with it.

Claim.—The arrangement of the ring B and glass C, with the rings D, eyes E E¹, stem G, and pipe A, all as and for the purposes set forth and described.

No. 30,076.—WILLIAM H. LIVINGSTON, of New York, N. Y.—*Improvement in Wood Saw Frames*.—Patent dated September 18, 1860.—This invention consists in attaching a metal plate to the cross bar of the saw frame, and connecting an adjustable brace to said metal plate and one of the end pieces of the frame.

Claim.—The combination of the brace rod E and metal plate D, arranged or applied to the saw frame, substantially as and for the purpose set forth.

No. 30,077.—WILLIAM E. MCINTIRE, of Salem, Mass.—*Improvement in Safety Stables for Horses, &c.*—Patent dated September 18, 1860.—This invention has for its object the preservation of horses or cattle, in case a fire should occur in the house where they are stabled, and even should the fire be so great as to prevent persons entering the stable, the animals may be readily and safely taken therefrom without danger to man or beast.

Claim.—The doors E, springs G, bar H, lever bolts J, and hand lever K, when the same are combined for joint action and arranged substantially in the manner and for the purposes set forth.

No. 30,078.—PATRICK MIHAN, of Boston, and MAJOR A. LANE, of Charlestown, Mass.—*Improvement in Apparatus for Condensation*.—Patent dated September 18, 1860.—The vessel A is furnished at its bottom with a rim *a*, which fits into the top of a kettle or boiler containing hot water. The bottom of the vessel A forms a truncated cone *b*, which is surmounted by the trumpet shaped false bottom *c*; the lower edge of this bottom projects beyond the upper edge of the truncated cone, and above the point of said bottom a tube B rises, which is supported by its trumpet shaped end *d*, that rests on the bottom *c*.

Claim.—The arrangement of the water spaces C and E with the tubes B and *k* and with the trumpet shaped bottom *c*, in combination with the steam space D and tubes *h*, constructed and operating substantially in the manner and for the purpose set forth.

No. 30,079.—DANIEL MOORE, of Brooklyn, N. Y.—*Improvement in Revolving Fire Arms*.—Patent dated September 18, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim the centre pin 3 and its collar at the back end, retained within the recess *g*, combined with the cylinder *c* and barrel *b*, swinging on the gudgeon *l*, in the manner and for the purposes set forth.

And, in combination with said centre pin 3, moving as aforesaid, I claim the latch *i*, to retain the parts in place while the arm is being discharged, as specified.

No. 30,080.—ALEXANDER MORTON, of New York, N. Y.—*Improved Trip Hammer*.—Patent dated September 18, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the automatic stop mechanism for giving the positive number of strokes required to the hammer, formed by the gearing D P R S T U, with the perforated disk V, the tilting shaft Q, lever Y, provided with the pin q, and spring Z, and bar B¹, the latter being arranged relatively with the hammer arm H, essentially as set forth, the rotary motion of the regulating disk V being controlled by the hammer shaft, so that the disk is moved simultaneously with the hammer, and the number of blows of the latter regulated by the movement of the former.

Second. The employment or use of the elastic band O, applied to the hammer arm H, essentially as and for the purpose set forth.

Third. Forming the hammer arm H, socket G, and head J separately, and connecting them together by means of the plate K and screw rods h h, the latter being screwed into head J.

Fourth. The employment or use of the bed M, provided with a convex face and fitted in the anvil L, for the purpose set forth.

No. 30,081.—S. W. MUDGE, of Rome, N. Y.—*Improved Washing Machine*.—Patent dated September 18, 1860.—The shaft B has a beater C attached to it. This beater is comprised of a disk or wheel b, which is attached to the shaft B, as shown at c, and has a series of slats d attached to its rim at a suitable distance apart. These slats are rounded at their inner sides.

Claim.—The arrangement of the open rotary slatted beater C, shaft B, and pinion j, with the central hollow rotating beater D, rotating disk g, pinion i, and driver E, as and for the purpose shown and described.

No. 30,082.—GEORGE NEILSON, of Boston, Mass.—*Improvement in Lamps*.—Patent dated September 18, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the arrangement and application of the contractile ring with reference to the spring jaws a a a and the shaft of the wick elevator, and to operate in manner substantially as described.

I also claim the improved mode of constructing the base part of the conical deflector, viz: with an annular shelf e and trough f, and a series of air inlets g g, arranged together and with the conical body of the deflector, substantially as specified.

No. 30,083.—WILLIAM NEWELL, of Philadelphia, Pa.—*Improvement in Apparatus for Cleaning, Drying, and Polishing Coffee, &c.*—Patent dated September 18, 1860.—The claim and engravings explain the nature of this invention.

Claim.—In combination with a revolving double-jacked cylinder, with steam space between them and doors communicating with the interior thereof, the arrangement of the wire rubbing surfaces F, the flanges d, radial heating tubes E, and the flanged longitudinal heating tubes M, for the purpose and in the manner set forth.

No. 30,084.—JOHN NORTH, of Middletown, Conn.—*Improved Snap Hook for Harness*.—Patent dated September 18, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A snap hook in which the eye is made in one piece with the tongue, and has a position relative to the bearing point of the hook or that point in which a ring rests, substantially such as is before described.

No. 30,085.—GEORGE M. NORTON, of San Francisco, Cal.—*Improved Amalgamator*.—Patent dated September 18, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination of the circular annular revolving funnel G G, with attached pipes H H H H, with the annular revolving pan I I and annular plates J J and K¹, to compel the material to traverse from the centres to the circumference, and insure the certainty of its being operated on before it can possibly be discharged at the openings N M O.

Second. The annular revolving pan I I and the annular plates J J and K, constructed and operated as set forth.

Third. The manner in which the grooves or openings and projection in the different plates are arranged, according to curved lines, as shown in the different drawings, and the manner in which the projecting points O O of the plates J J and K¹ take the feed and force it from the centre as it passes through the pipes H H into the mill, causing an eccentric motion in the material under operation, thereby causing it to come repeatedly under the operation of the mill or machine.

Fourth. The manner of adjusting the inside centre I I with the arms V V, so as to leave any desired space between the revolving centre and bottom of the pan L L, as well as giving it great facility for being removed and held out of the way whilst cleaning out the mill or machine.

No. 30,086.—BEARNARD O'BRYAN, of Lancaster, Pa.—*Improved Ore Washer*.—Patent dated September 18, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The construction and arrangement of the double cone-shaped cylinder, formed of cast iron plates, united as described, and furnished with solid pins and angular shovels on the inside, for agitating and advancing the ore to the discharging point, as represented.

No. 30,087.—DANIEL K. PEOPLES, of Philadelphia, Pa.—*Improved Stern Paddle Wheel*.—Patent dated September 18, 1860.—This invention consists in combining the shaft of a paddle wheel and the horizontal or diagonal engine or engines, which operate the same with sliding bearing blocks, certain screws, and the system of gearing, in this invention or its equivalent; the whole arranged and operating so that the paddle shaft may be raised and lowered at pleasure without materially affecting the proper relative position of the different parts of the engine.

Claim.—Combining the shaft A of a paddle wheel and the horizontal or diagonal engine, which operates the same, with the sliding bearing blocks D and D¹, the screws F F, and the system of gearing described, or its equivalent; the whole being arranged and operating substantially as and for the purpose set forth.

No. 30,088.—JOHN G. PERRY, of South Kingston, R. I.—*Improved Meat Cutter*.—Patent dated September 18, 1860.—The claim and engravings show the nature of this improvement.

Claim.—The combination of a tapering or slanting row of studs with the knives, substantially as and for the purposes set forth.

No. 30,089.—LEONARD T. PITKIN, of Hartford, Ct.—*Improved Frame for Swinging Lamps or Torches*.—Patent dated September 18, 1860.—This invention consists in the arrangement and application of a malleable iron ring, forming a part of the revolving and oscillating frame to contain a lamp or torch.

Claim.—The solid metal ring A, and cast with the pivots B B C C, in the manner and for the purpose substantially as set forth and described.

No. 30,090.—GEORGE P. PLANT and J. RAITH, of St. Louis, Mo.—*Improvement in Machines for Scouring, Cleaning, and Polishing Grain*.—Patent dated September 18, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the screen C and beaters k, brushes j and feeders i, when the beaters, brushes, and feeders, are placed within the screen C, and the latter made to rotate in a reverse direction to the former, and the screen formed with the three different kinds of perforations c d e, substantially as and for the purpose set forth.

No. 30,091.—AUGUSTUS REEVE, of Allowaystown, N. J.—*Improved Shutter Bolt*.—Patent dated September 18, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The supplemental socket I, having a position relatively with the socket H, as shown, in connection with the bolt C, provided with a lip f, and having a rising and falling, or equivalent movement for the purpose specified.

No. 30,092.—GEORGE ROSNER, of Rochester, N. Y.—*Improvement in Locks*.—Patent dated September 18, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the attachment to a lock of one or more "secondary locks," for the objects substantially as set forth.

Second. The construction of the "secondary lock" and its attachment to the movable portion of the primary lock, substantially as described.

Third. The independent bearings K L and M to the wheels H I and J, constructed substantially as described.

Fourth. In case of locks requiring an opening in the back, the attachment of a cover to some movable portion of the lock, which cover shall close the opening except when the bolt of the lock is out, for the object substantially as set forth.

Fifth. The construction of the "tumbler," with two independent bearings, one on a disk (as E) revolving with the handle of the lock, the other on the movable wheels H I, &c., substantially as described.

Sixth. The construction of the tumbler in two parts—the first part capable of motion in a single direction, the second part capable of motion in the same direction as the first part, and

also in a direction at an angle (as a right angle) to the motion of the first part, for the object and in the manner substantially as described.

Seventh. The combination of the spring P, tumbler O, and projecting cam p, of the eccentric F, for the purpose of supporting the tumbler during the greater part of the revolution of the handle of the lock, substantially as described.

Eighth. The construction of the spindle of the lock with a shoulder, for the object substantially as set forth.

No. 30,093.—GEORGE W. SCOLLAY, of St. Louis, Mo.—*Improvement in Glass Moulds*.—Patent dated September 18, 1860.—This invention consists of a hollow mould in combination with a covering and plunger of peculiar construction.

Claim.—The use of moulds for pressing glass coffins, constructed as shown in Figs. 1, 2, 3, 4, and 5, and substantially as described, the coffin to be made substantially as shown in Fig. 8.

No. 30,094.—D. E. SOMES, of Biddeford, Me.—*Improved Heel for Boots and Shoes*.—Patent dated September 18, 1860.—This invention consists in the employment of a hollow metallic heel, which is provided around its top with a flange pierced with small holes, through, or by means of which, the heel is secured to a boot or shoe.

Claim.—The described heel made entire in one piece, and provided with a flange B around its top pierced with small holes, substantially in the manner and for the purpose specified.

No. 30,095.—L. W. THICKSTUN, of Chatfield, Minn.—*Improvement in Hanging Window Sashes*.—Patent dated September 18, 1860.—The object of this invention is to combine a sash stop and weather strip in such a way that the device will operate perfectly in either capacity, and also to use with the sash and weather strip spring bolts so arranged as to serve as pivots and allow the sashes to be turned in the frame horizontally for the purpose of washing, ventilation, &c.

Claim.—The bolts *l* fitted in the sashes B B*, in connection with the strips B¹ in the sashes, and the holes *n* in the stiles *l* of the frame A, all being arranged for joint operation, as and for the purpose specified.

No. 30,096.—JOEL TIFFANY, of Syracuse, N. Y.—*Improvement in Machines for Hulling Cotton Seed*.—Patent dated September 18, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the employment of the main rotating roller, formed substantially as described, with pyramidal teeth, by longitudinal and circumferential grooves, when operating in combination with one or more working rollers, having similarly formed teeth, and so arranged and geared that the periphery of the working roller shall travel with greater velocity than the periphery of the main roller, the zones of teeth on the working roller operating opposite the spaces between the zones of teeth on the main roller, substantially as and for the purposes specified.

I also claim, in combination with the main and working rollers, having a construction and mode of operation substantially such as described, the employment of a range of teeth on one of the bottom edges of the hopper, substantially as and for the purpose specified.

And I also claim, in combination with the main and working rollers, substantially such as above described, the employment of a screen or sieve below them, and a rotating whipping cylinder of teeth below the screen, substantially as described, that the screen may separate the loose hulls from the kernels, and that the whipping cylinder of teeth may finally loosen the remaining hulls and fibres substantially as set forth.

And, finally, I claim, in combination, the main and working rollers for hulling, the screen for effecting the first separation, the whipping cylinder of teeth that play between fixed teeth to effect the final loosening of the hulls and fibres from the kernel, and the final screen for effecting the final separation of the kernels from the last fragments of hull and from fibres, substantially as set forth.

No. 30,097.—WILLIAM B. TREADWELL, of Albany, N. Y.—*Improvement in Stoves*.—Patent dated September 18, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the employment of the gas cups C C, with projecting lips above, when the said cups are perforated with small holes, and are provided with an opening through which the products of combustion pass, substantially as specified.

Second. The combination of the cups C C, with the horizontal flues E, and the vertical flues F, the same being used substantially as and for the purpose specified.

Third. The use of the hot air chamber H, in connection with the cylinder G, the gas cups C C, and the flues E and F, the several parts being employed substantially in the manner and for the purpose set forth.

No. 30,098.—MARK B. TRUE, of Newburyport, Mass.—*Improvement in Excavating Machines*. Patent dated September 18, 1860.—The object of this invention is to furnish a better means of operating the shovel and hollow cutter of J. W. MORRELL's ditching machine, patented May 10, 1853.

The inventor says: I *claim* the arrangement of the slotted pivotted lever G and adjustable roller *a*, with driving shaft I¹, wheel I, head block E, cutter box C, and shovel D, in the manner and for the purposes set forth and described.

I also claim the arrangement of the ratchets N N, shaft A, pawls M M, with the shaft J¹ and cams *d d*, in the manner and for the purposes set forth and described.

No. 30,099.—JOHN P. TUNNISON, of Ovid, N. Y.—*Improvement in Grain Cleaning Machines*. Patent dated September 18, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, carrying the upper half of the endless slatted belt E of my additional separator, over intermediate guide rollers H I, so that said upper half of the belt be divided into two portions of different inclinations, and another vertical, or nearly vertical, portion between the two, in combination with a fan blower M, hopper L, and skeleton bottom S, substantially as and for the purposes set forth.

Second. Arranging the fan within the endless slatted belt substantially in the manner and for the purpose described

No. 30,100.—WILLIAM WHARTON, JR., of Philadelphia, Pa.—*Improvement in Transferring Cars from One Track to Another*.—Patent dated September 18, 1860.—This improvement consists in an arrangement of rails, forming a main track and a siding or turn out, with a guide rail, in combination with car wheels, having simple annular projections so arranged as to bear against the side only of said guide rail, by means of which the wheels are directed on to the siding or turn out by a lateral thrust.

Claim.—The described arrangement of the rails A A¹ and A² and B B¹, and the curved rail D, in combination with wheels having simple annular projections, so arranged as to bear against the side only of the said curved rail, as and for the purpose set forth.

No. 30,101.—ETHAN WHITNEY, of Lynn, Mass.—*Improved Folding Case Bedstead*.—Patent dated September 18, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the described improved manner of constructing the case A, and applying it to the parts C C, such being not only particularly useful in supporting the rear part D, but beneficial as respects not only the turning of the parts C D, either upward or downward, but in respect to their elevation high enough for the case A to receive a washstand underneath the said parts C D, in manner as described.

I also claim the arrangement of the folding legs *l o p*, with respect to the part C and a leaf G, applied thereto and operating therewith substantially as specified.

No. 30,102.—SETH L. WILKINSON, of Cross Plains, Texas.—*Improved System of School Desks*.—Patent dated September 18, 1860.—This invention consists in so constructing and arranging the desks of a school room that the desk of each scholar shall be at right angles to his seat, and the bottom of the desk be on nearly the same horizontal plane, the former being attached to the back of a contiguous seat.

Claim.—Connecting a series of seats A A¹, in a school room, by means of boards *a b*, running at right angles to the seats, in the manner and for the purposes described

No. 30,103.—McCLINTOCK YOUNG, JR., of Frederick, Md.—*Improvement in Combined Rake and Reel for Harvesters*.—Patent dated September 18, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, in combination with a continuously revolving inclined reel shaft and a stationary cam, a rake and reel having the corresponding and differential motion set forth while turning with said shaft, substantially as described.

Second. I also claim, in combination with a rake turning on the same shaft with the reel, but in a variable path therewith, a counterpoise to prevent said rake from suddenly rising or falling, substantially as and for the purpose described.

No. 30,104.—HAZEN J. BACHELDER, of Marlboro, Mass., assignor to himself and WILLIAM F. EAGER, of the same place.—*Improvement in Lamps*.—Patent dated September 18, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The application of a reflector to a lamp cap, substantially as described, by means of the projection *g*, extended from the reflector and between the shoulders of such cap, and held in place by the action of the screws thereof, as explained.

No. 30,105.—DANIEL C. COLBY, of Newport, N. H., assignor to himself and EDMUND BURKE, of the same place.—*Improved Fruit Drying Attachment to Cooking Stoves*.—Patent dated September 18, 1860.—The object of this invention is to intercept the heat which radiates from the stove, and which passes off into the room, and to apply the same to the purposes of warming and drying.

Claim.—The receiving chamber B, the perforated partition C, the central partition, composed of the plates D D¹ and E, and the escape flue H, in combination with the box composed of the wall plates A A, the top plate A¹, and the doors F F¹, constructed and arranged as set forth.

No. 30,106.—JOHN FORCER, of Glassborough, N. J., assignor to WHITNEY BROTHERS, of the same place.—*Improvement in Tools for Forming Screws in the Necks of Bottles*.—Patent dated September 18, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Forming a screw within the neck of a bottle, and shaping the exterior of the neck by means of the rod E, its screwed portion *e*, and the jaws B B, the latter being arranged to open and close substantially as set forth, and the whole being combined with the devices described, or their equivalents, so that the rod may be readily released or retained for the purpose specified.

No. 30,107.—JOHN M. JONES, of New Orleans, and JOSEPH M. CHARPANTIER, of St. Mary's Parish, Louisiana, assignors to themselves and A. B. CHARPANTIER, of said New Orleans.—*Improvement in Bagasse Furnaces*.—Patent dated September 18, 1860.—This invention consists in the employment of a movable grate, arranged and operating in combination with a fixed grate or bed.

The inventors say: We *claim* the employment of a movable grate E E¹, applied to a furnace and operating in combination with the fixed grate or bed B thereof, substantially as and for the purposes described.

And we also claim the division of the movable grate E E¹, into two sections, to run in and out of the furnace on opposite sides thereof, and meet in the middle of the interior thereof, substantially as described.

No. 30,108.—HERMAN G. G. PAULSEN, of New York, N. Y., assignor to HORATIO N. FRYATT, of the same place.—*Improvement in Refining Sugar*.—Patent dated September 18, 1860.—The claim explains the nature of this invention.

Claim.—The application of alcohol of a certain strength, in combination with sulphuric ether, in the proportions as stated, and at a degree of heat of the boiling point of said combined liquors, and then of 10° or 15° Fahrenheit above it, to raw sugars and molasses, for the purpose of refining and purifying said raw sugars and molasses, as stated.

No. 30,109.—ETHAN ALLEN, of Worcester, Mass.—*Improvement in Metallic Cartridges*.—Patent dated September 25, 1860.—This invention consists in constructing a projection or lip on a metallic cartridge for the reception of the fulminate.

Claim.—Constructing a metallic cartridge, with a projection or lip, for the reception of the fulminate, substantially in the manner and for the purpose set forth and described.

No. 30,110.—LEVI L. ALRICH, of Carthage, Mo.—*Improvement in Faucets*.—Patent dated September 25, 1860.—This invention consists in operating a plug or valve that is fitted into a cylindrical chamber projecting up from the top of the faucet, so that it may be moved up or down, but which will not turn in the cylinder; said plug being seated in such a manner in the faucet tube and acted upon by a spring that the flow of liquid can only be obtained by using a key adapted to the faucet.

Claim.—The valve plug C, with its key hole recess *g*, and spring G, in combination with the cylinder E, and the faucet portions A *a* and B, the whole being arranged and operated by a key, in the manner and for the purposes set forth.

No. 30,111.—GEORGE B. ARNOLD, of New York, N. Y.—*Improvement in the Manufacture of Ruffles*.—Patent dated September 25, 1860.—The claim and engravings explain the nature of this invention.

Claim.—As a new article of manufacture, the ruffle or plaited fabric made as described; that is to say, the fabric to be plaited or ruffled being operated upon so as to be ruffled by the feeding device, and fastened by the stitching apparatus of a sewing machine at one and the same operation, when no binding or foundation fabric is employed.

No. 30,112.—GEORGE B. ARNOLD and ALFRED ARNOLD, of New York, N. Y.—*Improvement in Sewing Machines*.—Patent dated September 25, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim*, first, in a sewing machine, the employment of the separator C, or its equivalent, for the purpose of separating two pieces of cloth E and F, and thereby protecting F from the action of the gathering mechanism, substantially as set forth.

Second. Gathering cloth and stitching or fastening the gathers on a sewing machine, by the combined action of the single feeding device A, presser foot B, and separator C, or their equivalents, substantially in the manner described.

Third. Regulating the length of the stitches in the production of a gathered fabric, by changing the position of the separator C, or of C, and the presser foot B, relatively to the forward extremity of the path traversed by the feeder A, substantially as set forth.

No. 30,113.—JAMES C. BALDWIN, of Waterville, N. Y., and M. D. BALDWIN, of Buffalo, N. Y.—*Improvement in Preserving Hops*.—Patent dated September 25, 1860.—This discovery relates to an improved mode of preserving the cones, or catkins, of the hops for storage and transportation, by which the natural and characteristic properties of the plant are retained for any length of time, unimpaired in any degree of latitude, or under atmospheric changes, or vicissitudes of weather to which they may be exposed, which is not the case in the ordinary mode of preserving hops.

Claim.—The described process of preparing and preserving hops, substantially as set forth.

No. 30,114.—G. S. BALL and WILLIAM H. NAUMAN, of Dayton, Ohio.—*Improvement in Seed Drills*.—Patent dated September 25, 1860.—In the engraving the inside is shown with the feeder *a*, working on a roller R. The slides slightly opened are seen at *c*.

Claim.—The arrangement and combination of the feeder *a*, the indicator D, graduated arc E, slides B B, and cut-off F, the whole constructed and operating as set forth.

No. 30,115.—BENJAMIN BARNARD, of Farmington, Ohio.—*Improvement in Seeding Machines*. Patent dated September 25, 1860.—Within the box D there is placed a longitudinal bar L, which is connected by a rod M with the bar K. To the bar L there is attached a series of metal loop-shaped scrapers *a*¹; these scrapers are attached to the bar L at equal distances apart, and directly over the holes *u* in the slide *v*.

Claim.—The arrangement of the plates *n h g j*, slide *v*, scrapers *a*¹, and bars K L, and rod M, as and for the purpose shown and described.

No. 30,116.—GEORGE E. BEACH, of Jersey City, N. J.—*Improved Railroad Switch*.—Patent dated September 25, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, so hinging and connecting two rails B C, or J K, in a continuous series that their positions may be shifted, for the purpose of guiding a train upon another track without breaking their continuity, substantially as set forth.

Second. I claim the fixed bearings *m m*, in combination with the forked bar or rod P, and the hinged continuous rails B C and J K, substantially as and for the purpose described.

Third. I claim, in combination with the hinged continuous rail, or rails B C J K, the employment of the tongue or tongues E G, operating together, substantially as and for the purposes described.

Fourth. I claim, in combination with the hinged continuous rails B C J K, and tongues E G, the spring or springs R T, or their equivalents, arranged substantially as and for the purpose set forth.

No. 30,117.—SAMUEL A. BLACK and FREDERICK C. FORD, of Erie, Pa.—*Substitute for Railroad Frog*.—Patent dated September 25, 1860.—This invention is designed to perform all the functions of a frog ordinarily used on railroads for guiding the train in its passage on the track in crossing another track, and to be operated by the wheels of the locomotive.

Claim.—The arrangement of the levers and bars set forth, in combination with the piece *c* of the rail, supported upon the chair and operated as described.

No. 30,118.—J. H. BOYD, of Baltimore, Md.—*Improvement in Saddles*.—Patent dated September 25, 1860.—This invention consists in providing the cantle of a saddle with an India rubber roll.

Claim.—The application to the cantle of saddles of an India rubber roll, as described.

No. 30,119.—T. E. C. BRINLY, of Louisville, Ky.—*Improvement in Cultivators*.—Patent dated September 25, 1860.—The nature of this improvement is shown by the claim and engravings.

Claim.—The combination and arrangement of the plough beam A, provided with removable feet or standards D C F, and the two pairs of adjustable rings or arms H H N N, provided respectively with the shares J, and teeth L, as and for the purposes set forth.

No. 30,120.—J. CARD, of Cleveland, Ohio.—*Improved Carriage Jack*.—Patent dated September 25, 1860.—This invention relates to a carriage jack having a rolling and moving fulcrum, which, with a foot piece, forms the supports to the carriage axle tree, when the same is raised in order to remove the wheel.

Claim.—The special arrangement of the wheel A, lever E, and foot piece D, operating as and for the purpose set forth.

No. 30,121.—ALFRED CARSON, of New York, N. Y.—*Improved Stench Trap for Sinks*.—Patent dated September 25, 1860.—A represents a sink, or basin, which may be of any proper form and dimension. At the bottom of the sink or basin, at about its centre, there is a small box or chamber B, which communicates with the sink, and has the eduction pipe C passing up a proper distance within it.

Claim.—The arrangement of the chamber B, plate *a*, partition *a*¹, screen *d*, and pipe C, with the basin A, in the manner and for the purposes shown and described.

No. 30,122.—WILLIAM CLEVELAND, of Orange, N. J.—*Improvement in Faucets*.—Patent dated September 25, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, in combination with the body and top of a faucet, one of which is packed with suitable flexible material, the elastic washer *e*, for the purpose and substantially in the manner described.

I also claim the recesses *m m*, in the inside of the body of the faucet, to allow the packing to swell or distend into, and thus prevent it from being injured or misplaced by the turning of, the tap, substantially as described.

I also claim, in combination with the packing, the ribs or projections *o*, that imbed themselves therein, to prevent said packing from slipping, substantially as described.

No. 30,123.—JOHN W. COCHRAN, of New York, N. Y.—*Improvement in Projectiles*.—Patent dated September 25, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the construction of projectiles with corrugations, or hollow beads *a a b b*, made and applied substantially as set forth and described, so that the force of the explosion of the charge will cause said corrugations to be expanded laterally, as and for the purpose set forth and described.

Second. The mode of providing for the lubrication of the gun by the perforations *n n*, in the beads, fillets, or corrugations of the cap or other portion of the projectile.

Third. Placing the missiles or substance to be scattered by the explosion of a hollow projectile within a cylindrical casing D, fitted to the interior of the projectile, substantially as and for the purpose described.

Fourth. The employment of the cap C, or its equivalent, with the cylinder A, as and for the purposes set forth and described.

Fifth. The arrangement of the tube F, nipple *g*, plunger G, and spring H, in combination with the powder cylinder E, substantially as described.

No. 30,124.—PATRICK CADY, of Hamilton, N. Y.—*Improved Clothes Frame*.—Patent dated September 25, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The connecting of the inner ends of the arm E of a folding clothes frame, by bevel or mitre gears C, substantially as set forth.

No. 30,125.—G. W. CUNNINGHAM, of Paris, Mo.—*Improvement in Ploughs*.—Patent dated September 25, 1860.—This invention consists of the mould board I G J, extending laterally from the standard B; it is open at *a a a*, and the horizontal edges L and M are made sharp. The standard B is provided with a coulter edge from the point up to the plough beam A, to which the standard is secured in the usual manner. The landside handle C is attached to the rear end of the plough beam, and to the rear end of landside E, the latter extending from the point of the standard back.

Claim.—The arrangement in a plough of a mould board I G J, open at *a a a*, coulter H, sharp edges M L, furrow side E, handles D C, and bearer A, as and for the purposes described.

No. 30,126.—P. DAVEY, of Portsmouth, Ohio.—*Improvement in Iron Ties for Cotton Bales.*—Patent dated September 25, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The manner described of fastening the ends of an iron tie, by means of the elevations a^1 , fitting into the corresponding depressions a , when used in connection with a keeper B, or its equivalent, all substantially as and for the purpose specified.

No. 30,127.—A. G. DAVIS and H. S. FROST, of Watertown, Conn.—*Improvement in Parasols.*—Patent dated September 25, 1860.—A and B exhibit the two main parts of the stick which are so connected by a folding joint C as to enable one of such parts to be folded down upon the other, the said folding joint being composed of two socketted portions, or slides $a b$, and a flat connection bar c , the bar c being jointed to each of the said portions $a b$.

Claim.—The combination and arrangement of the duplex spring catch E, and the two slots $d e$, with the tubular slide b , and the reception tube D, of the folding joint C, of a parasol stick, the whole being to operate in manner, as specified.

No. 30,128.—P. S. DEVLAN, of Elizabethport, N. J.—*Improvement in Journal Boxes.*—Patent dated September 25, 1860.—The claim explains the nature of this invention.

Claim.—The employment of paper pulp to form boxes for bearings of journals of shafts and axles, substantially as before described.

No. 30,129.—DAVID ELDRED, of Monmouth, Ill.—*Improvement in Seeding Machines.*—Patent dated September 25, 1860.—Each bottom a of the seed boxes has a seed conveying spout d attached, and in the frame A directly behind each seed box E, there is placed a vertical adjustable bar J, which is secured at any suitable height, by pins e , passing into any of a series of holes f in the sides of the bars J.

Claim.—The arrangement of the cutters M, guards K, and adjustable bars J, with the variable cells $c c$, covers I, seed boxes E E, elastic plate l , pole N, and frame A, as and for the purposes shown and described.

No. 30,130.—WILLIAM DOUGHERTY, of Philadelphia, Pa.—*Improved Saw Grinding Machine.*—Patent dated September 25, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the reciprocating frame Q, and the frames R and S, connected together and arranged substantially as set forth, in combination with the revolving grindstone.

Second. The frame R, hung to the reciprocating frame Q, substantially in the manner described, in combination with the arm q , and the adjustable slotted bar U, the whole being arranged and operating substantially as and for the purpose set forth.

Third. The frame S, with its rib w , and the stationary arm V, or its equivalent, in combination with the reciprocating frame, for the purpose specified.

Fourth. The yielding plates T T, with their rollers $p p$, when arranged in respect to the frame, substantially as and for the purpose set forth.

No. 30,131.—SILAS DODSON, of San Francisco, Cal.—*Improvement in Machines for Cleaning Rice.*—Patent dated September 25, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the blocks G G, composed entirely of stone, forming a vertical hollow cylinder, with uninterrupted inner surface, when the said blocks are arranged and combined with the drum J, and its sheep skin strips, as and for the purpose set forth.

Second. The drags or scrapers $n n$, hung loosely to the drum within the folds of the sheep skin strips, and arranged in respect to the stone cylinder, as specified, in combination with the sheep skin strips, arranged as described.

No. 30,132.—CYRUS J. FAY, of Hamonton, N. J.—*Improvement in Hay Rakes.*—Patent dated September 25, 1860.—In this invention there is employed a rotating cylinder provided with movable, or adjustable teeth, and in connection with the same elastic guides, and an intermittingly rotating crib reel.

The inventor says: I *claim*, first, the revolving cylinder E, provided with the self-adjusting teeth i , arranged substantially as and for the purpose set forth.

Second. The combination of the revolving toothed cylinder E, guides G, and intermittingly rotating crib reel formed of the shaft n and rods o , as and for the purposes specified.

No. 30,133.—ROBERT W. FENWICK, of Washington, D. C.—*Improved Metallic Bands for Cotton Bales.*—Patent dated September 25, 1860.—This invention consists in a turning fastening for metallic bands for cotton bales, made or cast in the form of a right angle, or a com-

pound of two right angles, and with a slot at each side of, and a little below the corner of, the two meeting lines forming the angle or angles, so that the inner, or under portion of the fastening, when applied, will stand at right angles to the inner surface of the metallic band.

Claim.—The fastening, substantially as described, for metallic bands for cotton bales.

No. 30,134.—ELMER C. FORD, of New York, N. Y.—*Improved Apparatus for Opening and Closing Hatchways.*—Patent dated September 25, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Opening and closing hatchways automatically by means of a revolving screw and cams, or their equivalents, such cams and screw having a relative motion to the hoisting gear and to the ascent and descent of the load, and which are so arranged and connected with the hatches that each of them, respectively, shall thereby open at the passing of the load and close again after its passage, substantially as set forth.

No. 30,135.—HENRY H. FOYE, of Ottawa, Ill.—*Improvement in Harvesters.*—Patent dated September 25, 1860.—This invention relates to an improved position for the reel posts of an overhanging reel, with respect to the main frame, draught bar, and cutting apparatus, whereby greater steadiness and regularity in its revolution are secured, and the efficiency of the whole machine is improved when in use.

Claim.—The arrangement of the reel post P and Q, with respect to the main frame, draught bar J, and the cutting apparatus, substantially in the manner described, and for the purpose specified.

No. 30,136.—EDWIN J. FRAZER, of Kansas City, Mo.—*Improvement in Ploughs.*—Patent dated September 26, 1860.—This invention relates to certain improvements in that class of ploughs which are connected with wheels and are termed "sulky ploughs."

Claim.—Connecting the plough beam K, to the bar G, through the medium of the pendent bar I, provided with the slide *i*, and bolt *k*, in connection with the clip J, attached to the plough beam K, and provided with the slot *l*, substantially as described.

No. 30,137.—HENRY FRANZ, of Philadelphia, Pa.—*Improvement in Floors for Malt Kilns.*—Patent dated September 25, 1860.—This invention consists in making the plate for malt kiln floors of wire, or otherwise into rails whose transverse sections are cuneate, or thicker along their upper than they are along their under edges, and united together with their sides parallel to each other, leaving spaces between so as to produce a grated plate of the said material.

Claim.—The wire rail plate described, the same being constructed substantially as described and for the purpose specified.

No. 30,138.—GEORGE FROST, of Brooklyn, N. Y.—*Improvement in Cut-off Valves for Steam Engines.*—Patent dated September 25, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the opening of the balance poppet valve D by its valve rod E coming in contact with the adjustable stop F, through the movement of the box slide valve A.

Second. The retaining of the balance poppet valve D, after it is opened by the catch K, or its equivalent, until the proper period for tripping it again occurs.

Third. Tripping the catch K by the pins L on the sliding bars M, they being in connection with the governor.

Fourth. The opening of the balance poppet valve D the reverse way, by means of a lever W, in the manner as described and set forth, through the movement of the box slide valve A.

Fifth. The closing of the balance poppet valve D by a small cylinder and piston Y, having steam continually impinging on its piston, when the catch K is disengaged, which cylinder and piston Y can be arranged in any required position, the whole being combined, arranged, and operating substantially as described, and set forth.

No. 30,139.—J. L. GARLINGTON, of Snapping Shoals, Ga.—*Improvement in Sowing Machines.*—Patent dated September 25, 1860.—The object of this invention is to obtain a simple and efficient machine for planting all kinds of seed, and also for sowing pulverulent manures.

Claim.—The vibrating hopper D, in connection with the fixed bag and stationary standard H, provided either with the rod *l*, with arms *m* attached, or provided with the supplemental bag *n*, as and for the purpose set forth.

No. 30,140.—JOSEPH L. HALL, of Cincinnati, Ohio.—*Improvement in Locks*.—Patent dated September 25, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the peculiar construction of the bolt D, and its arrangement, with reference to the other parts of the lock, whereby the whole mechanism is enclosed within and protected by the bolt.

Second. I claim the combination, with the tumblers 1, 2, &c., of the central plate or disk F, as constructed, the same being made to operate in connection with the central stem H, in the manner as and for the purpose specified.

Third. I claim making the tumbler 2, with an internal sectoral enlargement z , for the purpose of affording space u for the guard plate J, without destroying the continuity of metal composing the tumbler.

Fourth. I claim the conical key blocks I I¹, constructed substantially as described, and inserted into the door plate, with reference to the stems G and H, for the purpose of operating a combination lock from without by means of a key, in the manner specified.

Fifth. I claim the peculiar construction and adaptation of the stems G H, so that the relative position of the same, with reference to their corresponding key blocks I I¹, may be varied in the manner and for the purpose specified.

Sixth. I claim the combined arrangement of the internal enlargement y upon the tumbler 4, the pin w , upon the outer surface of the same, and the corresponding pin upon the under surface of disk F and the lug K, upon the stem H, for the purpose of rendering the combinations of the lock, and particularly the changes thereof, more obscure and intricate, as described.

Seventh. I claim the manner of changing the combinations without the necessity of removing the lock for that purpose, by allowing the stem H to be withdrawn from the inside of the lock and replaced in the contemplated new position, in the manner substantially as described.

Eighth. I claim the key 12 and the portable index plate 13, in combination, the former constructed with a part x fitted to, and entering an aperture in, the index plate in various positions, and forming therewith an element in the combination of the lock.

No. 30,141.—JACOB HALLER, of Ann Arbor, Mich.—*Improved Electro-magnetic Burglar Alarm*.—Patent dated September 25, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement of a series of ropes or chains B, extending over pulleys $a b$, in combination with the double armed levers $c d$, rockshaft E, and alarm F, or its equivalent, constructed and operating substantially in the manner and for the purpose specified.

Second. The arrangement of the pin p^2 on the hammer t of the alarm, in combination with a self-lighter H, substantially as described, so that, by the action of the hammer itself, the light is struck.

Third. The arrangement of the circuit breakers r and w and their connecting wires, in combination with the armature n of the electro-magnet, and with the hammer t and bell u , constructed and operated substantially in the manner and for the purpose set forth.

Fourth. The arrangement of the spring frame G in combination with the electro-magnetic alarm F, constructed and operating substantially as and for the purpose specified.

No. 30,142.—ZEBULON HUNT, of Hudson, N. Y.—*Improvement in Cooking Stoves*.—Patent dated September 25, 1860.—This invention consists in placing within the ventilated or air chamber brace, commonly attached to the lower side of the middle pieces between boilers in stoves and ranges, a detached arched brace or bridge, resting on its extremities on the bottom of the air chamber, and supporting at its crown the top plate of the middle piece, thereby preventing the latter from sinking or dropping at the middle.

Claim.—Placing the bridge or brace B, or any similar device, within the ventilated chamber A, substantially in the manner and for the purpose set forth.

No. 30,143.—JOHN JACOBS, of Columbus, Ohio.—*Improvement in Bee Hives*.—Patent dated September 25, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement of the posts A, joists B, top and bottom longitudinal strips $b b^1$, adjustable notched cross pieces $e^1 e^1$, detachable shouldered cross pieces $e e$, detachable longitudinal central strips d and sectional bottomless hives $g g^1 g^2$, when the whole is constructed and operated in the manner and for the purpose described.

Second. In combination with the above, the wire gauze ventilating valve s , when said valve is constructed and arranged in the manner and for the purpose described.

No. 30,144.—GEORGE W. KERSEY and JOHN J. KERSEY, of Beartown, Pa.—*Improvement in Potatoe Planters*.—Patent dated September 25, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The rotating disk F, armed with hooks *a*, in connection with the hopper G and rotating brush wheel H, the above parts being placed on a mounted frame A, and arranged relatively with each other, to operate as and for the purpose set forth.

No. 30,145.—CHARLES KINZLER, of New York, N. Y.—*Improved Sugar Cutting Machine.*—Patent dated September 25, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the plates A and B, made to move towards and from each other, and provided with knives running parallel to each other, and attached perpendicular on the faces of said plates, directly opposite each other, in combination with two rollers H and H¹, provided with knives *m m*¹, running horizontally across the surfaces of said rollers, and so combining said rollers that, in operation, these horizontal knives will act simultaneously on each side of the slabs or pieces of sugar, the whole being arranged and combined in the manner substantially as described.

No. 30,146.—W. H. LIVINGSTON, of New York, N. Y.—*Improvement in Fastening Axes to Handles.*—Patent dated September 25, 1860.—The object of this invention is to attach the implement to the handle in such a way that it may be readily detached when necessary, and also readily secured thereto, and a connection obtained, the invention admitting of the implement being adjusted on its handle by any person of ordinary ability, and with the aid only of a simple wrench.

Claim.—The arrangement of the wedges D D¹, cap E, and screw F, with the strap C, helve B, and axe A, as and for the purposes shown and described.

No. 30,147.—FERDINAND LUEDKE, of New York, N. Y.—*Improvement in Factitious Beer.*—Patent dated September 25, 1860.—The claim explains the nature of this invention.

Claim.—The combination of sugar, red wine, gum arabic, bicarbonate of soda, and tartaric acid, in the manner and for the purpose set forth.

No. 30,148.—FRANKLIN MAYNARD, of Cambridge, Mass.—*Improvement in Shoe Lasts.*—Patent dated September 25, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Providing that part of the last, on which the pegging is performed, with any substance or material of a plastic nature, or which can be resolidified and resurfaced for continued use without removal from the body of the last, and be pegged into without abrasion or destruction, in the same or any equivalent manner set forth and described.

No. 30,149.—CHARLES MESSENGER, of Warren, Ohio.—*Improved Chair for Invalids.*—Patent dated September 25, 1860.—This invention consists of a chair constructed with an adjustable block that can be raised or lowered; also, an adjustable table in front, on which to place food, or to write, that can be moved out of the way when not in use. There are two lids turned down in front, one or both of which can be raised.

The inventor says: I *claim* the seat A, movable piece A¹, support W, and button G, when these parts are constructed, arranged, combined, and operated as set forth.

I also claim the lids M N, slides R, cord S¹, pulley L¹, and ring O¹, when these parts are constructed, arranged, and operated as specified.

No. 30,150.—JAMES MILLHOLLAND, of Reading, Pa.—*Improvement in Slide Valves.*—Patent dated September 25, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the cap C, with its annular flanges *f* and *e*, and the spiral spring D, or its equivalent, when the flange *e* is so adapted to the hub *c* of the valve, that the said hub shall resist all lateral strains imparted to the cap, and when the whole is applied and arranged in respect to the valve, substantially as specified.

Second. I claim the described application of one or more severed metallic rings *i i*, fitted into grooves in the annular flange *d* of the valve, and bearing against the annular flange *f* of the cap, as and for the purpose set forth.

Third. I claim bevelling the upper sides of the annular recesses *h h*, so as to present a sharp edge, for the purpose specified.

No. 30,151.—JOHN B. MURRAY, of New York, N. Y.—*Improvement in Prepaid Envelopes.*—Patent dated September 25, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, a prepared postage stamp, of suitable size and form, for a postal wrapper for newspapers, periodicals, &c., substantially as described, and in contradistinction to the letter envelope stamp and the small stamp in common use.

Second. I claim, in connection with the wrapper stamp, parallel superscription lines, substantially as described.

Third. I claim, in combination with the wrapper stamp, a marginal coating of gum arabic, or other adhesive material, substantially as described.

Fourth. I claim a prepaid postage stamp, which is also a ruled and self-sealing newspaper wrapper, substantially as described.

No. 30,152.—WILLIAM T. NICHOLSON, of Providence, and T. EARLE, of Smithfield, R. I.—*Improved Egg Beater*.—Patent dated September 25, 1860.—The wheel E is attached to the hollow spindle or sheath H, through which the spindle F passes, and to the lower end of the spindle are secured the propeller blades G G. As the bevelled wheels D and E are rotated in opposite directions, the wire frame I I and the propeller blades G G will also be made to rotate in opposite directions.

Claim.—The arrangement of the propeller blades G G, in combination with the wire frame I I, substantially as described, for the purposes specified.

No. 30,153.—ISAAC PELHAM, of Ithaca, N. Y.—*Improved Method of Attaching Handles to Cross Cut Saws*.—Patent dated September 25, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The rods C E, fitted in the handle A, and provided with the screw nuts D F, and slotted parts *d*, the latter being fitted on the saw, and having their ends in notches *e e* therein, the ends of the saw being fitted in the bent notched ends *h h* of the plate *g*, essentially as and for the purpose set forth.

No. 30,154.—IRA PERREGO, JR., of New York, N. Y.—*Improvement in Shirt Bosoms*.—Patent dated September 25, 1860.—This invention consists in the insertion of one or more strips of linen, cotton, or other suitable material, in the plaits of the bosom, more or less, and stitched to the plaits.

Claim.—A shirt bosom, made with stiffening strips of the same or other material as the bosom, applied substantially as and for the purposes set forth.

No. 30,155.—JAMES M. RABB, of Charleston, S. C.—*Improved Railroad Frog*.—Patent dated September 25, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the rods C C¹ B B¹, and the curved chilled ridge D¹ D² D², when the chilled curved ridge has projections *b¹ b¹*, formed on it, and the bottom flanges of the rails have recesses *a¹ a¹* cut in them, substantially as and for the purposes described.

No. 30,156.—WILLIAM RALPH, of Holland Patent, N. Y.—*Improvement in Cheese Vats*.—Patent dated September 25, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the employment or use of a stove or heater B, fitted within a jacket *b*, and applied to the water chamber A of a cheese vat, substantially as and for the purpose set forth.

Second. In combination with a stove or heater B, thus applied to the water chamber A, the oblique strips *d*, attached to the bottom of said water chamber, for the purpose specified.

Third. The warm water reserve chamber and refrigerator E, applied to the vat, and arranged substantially as shown, to be used jointly either within the stove or heater B, and water chamber A, as occasion may require, for the purpose specified.

No. 30,157.—P. H. ROOTS, of Connerville, Ind.—*Improvement in Blowers*.—Patent dated September 25, 1860.—This invention consists in the combination with two pistons which form arcs of circles, each enclosing one quarter the circumference of a given circle, of two recesses which form quadrants of circles, when each of such recesses occupies just one quarter of the circumference of said circle.

Claim.—The combination of the pistons D D, and recesses E E, when so constructed as to present but four essential points of positive contact, as described and for the purposes set forth.

No. 30,158.—W. G. SAVAGE, of Clinton, Ill.—*Improvement in Corn Planters*.—Patent dated September 25, 1860.—The frame A, by the actuating lever K, may be tilted, or its front end raised, and the furrow openers or shares F readily elevated, when desired, above the surface of the ground. The depth of the furrow may be regulated by adjusting the chain *j*, which connects the front part of the frame A with the draft pole J.

Claim.—The arrangement of the slides *e e*, boxes B, levers *d d*, slide E, adjustable seat G, seat C, axle H, pole J, and lever K, all as shown and described for the purposes set forth.

No. 30,159.—CHRISTIAN S. SCHMIDT, of New York, N. Y.—*Improved Mop Wringer*.—Patent dated September 25, 1860.—This invention consists of a semi-circular board with a slot cut in it sufficiently large to receive the mop; this board is furnished with cleats that will prevent it from slipping off the tub or pail on which it is placed for use, in combination with a fixed and movable clamping arm, between which arms the end of the mop is held, while the water is wrung out of it.

Claim.—Combining, with the board A, having a slot C cut in it, as described, the pivotted arm E, and arm F; the same being arranged and operating as and for the purposes set forth.

No. 30,160.—WILLIAM J. SCOTT, of Albany, N. Y.—*Improved Lock for Burglar Proof Sockets, &c.*—Patent dated September 25, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The method of constructing a lock of two plates of metal, held together, when locked, by spring head bolts attached to one of the plates passing through suitable apertures made in the other plate, together with the key for separating the plates, substantially for the purpose and in the manner set forth in the within specification.

No. 30,161.—IVES SCOVILLE, of Chicago, Ill.—*Improvement in Hemp Brakes*.—Patent dated September 25, 1860.—This invention consists in the arrangement of successive sets of breaking, beating, and cleaning rollers, running at different speeds, and the lower rollers having their bearings in a frame vibrating upon the driving shaft in combination with a treadle.

Claim.—The arrangement of successive sets of breaking, beating, and cleaning rollers, running at different speed, and the lower rollers M¹ N¹ O¹, having their bearings in a frame B, vibrating upon the driving shaft D, in combination with a treadle I, substantially as and for the purposes set forth.

No. 30,162.—WILLIAM H. SCOVILLE and IVES SCOVILLE, of Chicago, Ill.—*Improvement in Quartz Pulverizers and Amalgamators*.—Patent dated September 25, 1860.—This invention consists in the arrangement of a double trough and gutter in combination with four crushing and driving wheels, two grinding rollers, and two breaking rollers, the various parts of the machine being connected and placed in relation to each other for the purpose of constituting a quartz mill and amalgamator.

Claim.—The arrangement of a double trough R U, and gutter Q, in combination with four crushing and driving wheels B B B B, two grinding rollers H H, and two breaking rollers J J; the various parts of the machine being connected and placed in relation to each other substantially as and for the purposes set forth.

No. 30,163.—J. C. SELLERS, of Woodville, Miss.—*Improvement in Cotton Cultivators*.—Patent dated September 25, 1860.—This invention consists in the arrangement of a reciprocating hoe frame and cam grooves, in combination with an independent revolving shaft, plough shares, and coverers of a cotton thinning plough.

Claim.—The arrangement of a reciprocating spring hoe frame N N G, and cam grooves L H, in combination with an independent revolving shaft E, and with the plough shares V V, and coverers U U, of the cotton thinning plough, substantially as and for the purpose set forth.

No. 30,164.—KIRBY SPENCER, of Minneapolis, Minnesota.—*Improved Refrigerator*.—Patent dated September 25, 1860.—This invention consists in placing a preservatory, having one or more tight, dark, dry ventilating apartments within a refrigerating chamber, and the edibles and fluids to be preserved to be placed in the apartments of the said preservatory.

Claim.—The apartments *f*, in combination with the ventilating apertures *g*, the aperture *x*, the sliding covers *j*, the ventilating flue K, the pipe L, the refrigerating chamber *x*¹, the apertures *h*, and the aperture I, constructed substantially in the manner specified, and operating together for the purposes above described.

No. 30,165.—THOMAS SPENCER, of Syracuse, N. Y.—*Improvement in the Manufacture of Common Salt*.—Patent dated September 25, 1860.—The claim explains the nature of this invention.

Claim.—The admixture with common salt, after crystallization, of sulphate of soda, or its equivalent, as and for the purposes set forth.

No. 30,166.—THOMAS T. STRODE, of Mortonville, Penn.—*Improved Calendar Clock*.—Patent dated September 25, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement and combination of the year wheel C, with the grooves *n n*¹ *n*^{*} and *o o*¹ *o*^{*}, or their equivalents, the month wheel D, the levers *h i*

and *b c*, the pins *m* and *c*, and the pawls *l* and *f*, constructed and operating substantially in the manner and for the purpose described.

Second. The arrangement of the grooves *n n¹ n²*, pin *e*, and pawl *f*, substantially as set forth, for the purpose of controlling the motion of the month wheel according to the variations in the lengths of the months.

Third. The arrangement of the grooves *o¹ o o²*, pin *m*, and pawl *l*, substantially as specified, for the purpose of controlling the motion of the year wheel.

Fourth. The manner in which the names of the months are arranged on the face of the year wheel, viz: marking the name of each long month once, and the name of each short month twice, in two consecutive spaces, as and for the purpose set forth.

Fifth. The employment of the year wheel C, constructed substantially as specified, for the purpose of controlling its own motion and that of the month wheel D.

No. 30,167.—W. S. STETSON, of Baltimore, Md.—*Improvement in Reaping Machines*.—Patent dated September 25, 1860.—This invention consists of a new implement, combining a rake and fork for use in connection with reaping machines. One end of the rake *a* is provided with a fork *b*.

Claim.—The improved implement for harvesters, the same consisting of the combination of a rake and fork, substantially in the manner and for the purposes set forth.

No. 30,168.—SAMUEL E. TOMPKINS, of Baltimore, Md.—*Improvement in Saddle Trees*.—Patent dated September 25, 1860.—This tree consists of two principal parts, to wit: the frame A, and the seat B, secured together by means of a screw *a*, in connection with a bolt *b*, which secures the check rein hook C to the tree.

The inventor says: I *claim*, first, a metal frame A for saddle trees, when said frame is cast with depressions *s s*, flanches *e e*, and holes *f f*, in the manner and for the purposes described.

Second. The use of a piece of leather D, of a form and size corresponding to the underside of the seat B, in combination with a frame A, which is constructed with depressions *s s*, flanches *e e*, and holes *f f*, in the manner described.

Third. The combination of the rear shoulder *m¹* of the hook H, with the jog *n* of the tree, in the manner and for the purpose described.

Fourth. The combination of the projections *h h* of the tree, with the shoulders or sockets *j j* in the underside of the seat, in the manner and for the purpose described.

No. 30,169.—JOHN UNDERWOOD, of Cameron, Ill.—*Improvement in Corn Planters*.—Patent dated September 25, 1860.—The shaft *a¹* is connected at each end by a crank and pitman, with a wrist or pin on the wheels B, whereby motion is communicated to the dropping wheels *a* from the wheels B by means of the pitman C. The cranks on shaft *a¹* are set at right angles toward each other, while the wrists or pins on the wheels B occupy a similar position in respect to each other.

Claim.—The relative arrangement and combination of the adjusting wheels H H, with their frames, supporting and marking wheels B B, pitman C C, dropping wheels *a a*, and opening wheels E E, operating as and for the purposes set forth.

No. 30,170.—WALTER WARREN, of Penn Yan, N. Y.—*Improvement in Ploughs*.—Patent dated September 25, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the beam A, when made from its forward part to near its union with the mould board, as described, with the standard E of the fore plough D, and mould board B, as specified, for the purposes set forth.

No. 30,171.—JAMES WHITE, of Cleveland, Ohio.—*Improvement in Smut and Scouring Machines*.—Patent dated September 25, 1860.—This invention embraces two points of novelty, first, the adjustable metallic perforated screen, in combination with the wire cloth, cockle, and chess screen, embracing also the motion of the screen frame and mode of suspending the same. Second. In relation to the adjustable beaters, which can be readily expanded or contracted and adjusted vertically or inclined at any desirable angle.

The inventor says: I *claim*, first, the frame F, springs L, perforated adjustable plate E, wire screen I, and plate K, the several parts being arranged and operated as described.

Second. I claim the adjustable beaters T, constructed, arranged, and operated substantially as and for the purposes specified.

No. 30,172.—J. G. WHITWELL, of New York, N. Y.—*Improved Curtain Fixtures*.—Patent dated September 25, 1860.—This invention consists of a new and improved form of curtain or shade fixtures, by which the curtain can be raised or lowered without the aid of any rack, pulley, or other device for holding the cord, and which will keep its place in any position it may be desirable to place it by simply pulling the cord.

Claim.—The arrangement of the spiral springs *d d*, between the divided half circles *a a* of the roller end, which, by expanding, holds a cord or band against a circular surface *f*, as described, substantially as and for the purpose specified.

No. 30,173.—JOHN F. WOOD, of Houma, La.—*Improvement in Cultivators*.—Patent dated September 25, 1860.—The ground is turned up by the shovels *D*, which are attached to the under side of the frame *A*, and the quantity of earth to be put on the plants is regulated by two adjustable hinged wings *E*. These wings swing on the upright rods *i*, and their position is determined by the hooks *j* catching the loops *k*, or in any other convenient manner.

Claim.—The arrangement of the hinged adjustable wings *E*, when used in combination with the adjustable frame *A*, shovels *D*, and rakes *C*, substantially in the manner and for the purpose set forth.

No. 30,174.—JOSEPH WORCESTER, of Newport, Ky.—*Improved Annealing Apparatus*.—Patent dated September 25, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The dwarf sleeper walls *e e* in the annealing furnace *A*, affording a bed for the annealing box *B*, when used in combination with the carriage *C*, or any similar carriage for raising or lowering its load; all substantially arranged as described, and for the purpose set forth.

No. 30,175.—ALLEN S. BALLARD, of Mount Pleasant, Iowa, assignor to himself and R. I. ROBESON, of the same place.—*Improvement in Earth Borers for Post Holes, &c.*—Patent dated September 25, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The manufacture of earth borers in separate parts, all arranged and operating substantially as and for the purposes set forth.

No. 30,176.—GEORGE BURNHAM, of Pittsburgh, Pa., assignor to himself, W. D. RINEHART, and C. A. NAUMAN, of the same place.—*Improvement in Oscillating Valves for Steam Engines*.—Patent dated September 25, 1860.—The claim and engravings explain the nature of this invention.

Claim.—So constructing the plug and seat of cylindrical or conical valves, substantially as described, as that the live steam from the boiler will press on both sides of the valve plug, while the exhaust steam will pass through a central cavity in the plug, for the purpose of equalizing the pressure of the steam on the plug, so as to prevent the valve wearing unevenly and to reduce the friction of the plug inside the valve seat.

No. 30,177.—HUGH W. COLLENDER, of New York, N. Y., assignor to himself and MICHAEL PHELAN, of the same place.—*Improvement in Cushions for Billiard Tables*.—Patent dated September 25, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Making cushions for billiard tables of two thicknesses of what is known as the soft compound of vulcanized India rubber, or allied gum, with an interposed thickness of what is known as the hard compound of vulcanized India rubber, or allied gum, or, as the equivalent thereof, with an interposed thickness of the soft compound of vulcanized India rubber, or allied gum, rendered hard by the admixture of fibrous or equivalent substance, substantially as and for the purpose specified.

No. 30,178.—SAMUEL F. GELSTON and JOHN T. JOHNSON, of Buffalo, and CHARLES R. TOMPKINS, of Rochester, N. Y., assignors to SAMUEL F. GELSTON and JOHN T. JOHNSON, aforesaid.—*Improvement in Stave Machines*.—Patent dated September 25, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The method of adjusting the machine to operate on staves of different lengths, by means of the index driving wheel *N*, in combination with the rib *b*, substantially as described.

No. 30,179.—JOHN LYKER, of Argosville, N. Y., assignor to himself and J. I. BROWN, of the same place.—*Improvement in Combined Roller and Manure Spreader*.—Patent dated September 25, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the rollers *B B* with the frame *A*, gear wheels *f g*, connecting rod *E*, hopper *D*, pendant *c*, and slide *b*, all as shown and described, for the purposes set forth.

No. 30,180.—ANTONIO MEUCCI, of Clifton, N. Y., assignor to the NEW YORK PARAFFINE CANDLE COMPANY, of Richmond County, N. Y.—*Improvement in Apparatus for Moulding*

Candles.—Patent dated September 25, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the combination of die and candle guide, substantially as described, for the purpose of finishing candles.

I also claim the combination of an elastic strap with the receiving bed, for the purpose of holding the candle in contact therewith.

I also claim the combination of die, candle guide K, and candle receiving bed, substantially in the manner and for the purpose described.

No. 30,181.—DUBOIS D. PARMELEE, of Salem, Mass., assignor to the BEVERLY RUBBER COMPANY, and said Company assignors to JOHN H. CHEEVER, of New York City.—*Improvement in Restoring Waste Vulcanized Rubber.*—Patent dated September 25, 1860.—The claim explains the nature of this invention.

Claim.—The process described of rendering waste vulcanized, hermized, or changed India rubber useful and capable of being reworked, for the manufacture of articles of trade and commerce, by reducing said rubber to a fine or powdered state, and then combining, with the same, India rubber, which has been modified by heat, so as to obtain it either in a semi-liquid or melted condition, or in a liquid or vaporous condition, *i. e.*, in the form of its products of distillation, substantially in the manner and modes herein set forth.

No. 30,182.—JAMES W. PARNELL, of Troy, N. Y., assignor to JAMES MORRISON, JR., of the same place.—*Improved Stove Grate.*—Patent dated September 25, 1860.—This invention consists in so constructing and combining parallel bars lengthwise of and to the frame of the fire grate, and with the said frame, as to form a shaking fire grate, one half of the bars of which move by using the shaking handle.

Claim.—An improved fire grate for stoves, consisting of the frame A, the separate and parallel grate bars B, and the rocker E, constructed and arranged as herein described and set forth.

No. 30,183.—HUBBARD W. PUTNEY, of Lyons, N. Y., assignor to himself and CYRUS C. CRANE, of Penn Yan, N. Y.—*Improvement in Sieves for Separating Grain, &c.*—Patent dated September 25, 1860.—A is a rectangular frame; on the upper side the wire gauze B is fastened; above the gauze is the separating board C, and at the under side of the frame is the conducting board D; at the highest end the frame E is attached by means of screws.

Claim.—The arrangement of the distributing board C, the conducting board D, and auxiliary sieve F, when applied to the frame A and gauge B, in the manner and for the purpose specified.

No. 30,184.—JOHN RANDALL, of Elmira, N. Y., assignor to himself and R. R. SMALLEY, of Troy, N. Y.—*Improvement in Slide Valves.*—Patent dated September 25, 1860.—This invention consists in certain means whereby the valve is relieved of all pressure towards its seat, and is made to work with an inconsiderable amount of friction.

Claim.—The employment, in combination with the valve, constructed with a single opening *b* right through it, of the induction cavity *b* in the seat, the plate E, and set screws F F, applied to the back of the valve, and a valve chest, in constant communication with the education pipe, the whole arranged and operating substantially as herein set forth.

No. 30,185.—J. C. RICHARDS, of Lafayette, Ind., assignor to himself, J. HUBBLER, and R. M. McGRATH, of the same place.—*Improvement in Corn Shellers and Cleaners.*—Patent dated September 25, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the cylinder *k*, made up of rods and arranged in relation to the revolving screen, and operated as herein set forth.

Second. The arrangement of the toothed cylinder *i* within the rod cylinder *k* and revolving screen cylinder *n*, with the hopper at the one end and the cob chute at the other end, the corn being delivered through the rod cylinder to the screen, the cobs being conveyed to the chute by the helical arrangement of the teeth, as described.

Third. The revolving screen or cleaner *n*, in combination with a sheller composed of the toothed cylinder and rod cylinder, or its equivalent, said cleaner rotating around the whole length of the sheller, and the entire surface of both sheller and cleaner being operative surfaces, as set forth.

No. 30,186.—JOHN J. WALSH, of New York, N. Y., assignor to himself, THOMAS L. BRAYNARD, and H. C. ADAMS, of the same place.—*Improvement in Gun Carriages.*—Patent dated September 25, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the use and arrangement of the hand wheel D and gear wheel

B, in combination with the supporting and pivot wheel A, substantially as described, for the purpose of running out and in and training cannon, as described.

I also claim the arrangement of the said wheels D and B, in combination with the geared sector J, for the purpose of elevating or depressing the gun, as described.

I also claim the arrangement of the rods L, links *h h*, and levers *k k*, in combination with the two carriages, substantially as described, for the purpose of lessening the extent and force of the recoil of the gun.

I also claim the arrangement and combination of the screw 1 2, and the pivot wheel A, substantially as described, for the purpose of elevating and lowering the gun carriage, for the purposes set forth.

No. 30,187.—FRANK H. WEST, of San Francisco, Cal., assignor to THOMAS S. SEABURY, of Stony Brook, N. Y.—*Improved Compass Protractor*.—Patent dated September 25, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination, with ordinary parallel rulers A, of a movable circle B, graduated as a compass, and provided with a semi-circular central opening *b*, with the exact centre of the circle marked therein, substantially in the manner and for the purposes herein set forth.

No. 30,188.—WILLIAM T. ZOLLIKOFFER, of Shelbyville, Tenn., assignor to himself and WILLIAM BROWN, of the same place.—*Improvement in Ploughs*.—Patent dated September 25, 1860.—To the side of the beam A there is attached a foot D, which is made of wrought iron. The upper part of the foot D is attached to the beam by a bolt *b*, and said upper end is directly under the back end of the upper part of the bar C. The lower part of the bar C has a side piece *d* attached so as to form a forked end.

Claim.—The arrangement of the curved bar C, foot D, and beam A, with the serrated bar E, slotted clevis F, pawls *e e*, and hooks *d¹ d¹*, all in the manner and for the purposes described.

No. 30,189.—J. D. ALVORD, of Bridgeport, Conn.—*Improvement in Making Emery Wheels*.—Patent dated October 2, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The method described of making emery wheels, and which consists in pressing or casting the wheel upon a flanged tube, so that, when the wheel contracts in drying, the central part thereof will have lateral support, and thus be prevented from cracking, and so that the wheel will become firmly attached to the tube and flanges, all as represented and described.

No. 30,190.—JOHN ANDREWS, of Elmira, N. Y.—*Improvement in Grinding Circular Saws*.—Patent dated October 2, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the anti-friction rollers E, when arranged in the manner set forth, for the purpose specified.

Second. The manner of presenting the saw to the stone, by means of a separate frame resting on a slide and moved by the set screw C.

No. 30,191.—HORATIO G. ARMSTRONG, of Philadelphia, Pa.—*Improvement in Paper Bag Machines*.—Patent dated October 2, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the employment, for severing the folded paper, of the upper and lower knives, with their edges X and Y, arranged in respect to each other, substantially as set forth, in combination with the revolving striker *k*, or its equivalent.

Second. In combination with the said knives and striker, I claim the rollers U and V, for retaining the end of the folded paper during the operation of the striker.

Third. The roller Q Q¹, in combination with the blade N, the upper roller having one or more collars *n n*, so arranged in respect to openings in the blade that the action of the rollers on the folded paper cannot interfere with the said blade, as set forth.

Fourth. The horizontal rollers K K¹ and the guide blocks J J¹, arranged in respect to each other and to the blade N, substantially as and for the purpose set forth.

Fifth. The plate L, with its projections *l* and *l¹*, or their equivalents, arranged and operating as set forth, for the purpose specified.

Sixth. Causing one edge of the paper to traverse in contact with a ratchet or notched wheel *b*, arranged to revolve in a trough containing the paste, as set forth, for the purpose specified.

No. 30,192.—SAMUEL W. BARR, of Mansfield, Ohio.—*Improvement in Velocipede Vehicles*.—Patent dated October 2, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, in three wheel wagons, the peculiar arrangement of the spring clutch *o*, hand levers *c c*, and break arms *e*, in combination with the devices for applying the motive power and guiding the wagon, as described, and for the purpose set forth.

No. 30,193.—HENRY BEHN, of New York, N. Y.—*Improved Alarm for Doors*.—Patent dated October 2, 1860.—This invention consists in the arrangement of a movable plate placed in the opening of a door and covered with a carpet, rug, or any similar substance, and so combining said plate with a lever or rod connected with a bell or alarm that any person passing through the door shall by his weight operate said plate so as to give an alarm and thereby announce his entrance or exit.

Claim.—The arrangement of a hinged plate *B*, acting on arms or levers fast on a shaft and placed in the opening of a door, when combined with a bell or alarm and operated in the manner and for the purpose substantially as specified.

No. 30,194.—WILLIAM B. BILLINGS, of New York, N. Y.—*Improvement in Vapor Lamps*.—Patent dated October 2, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the use of the hollow heater *B*, when constructed substantially as described and provided with the broad flange *D*, for the purposes set forth.

Second. I claim the use of the removable flange *F*, in combination with the heater *B* and broad flange *D*, when constructed substantially as described, for the purpose of regulating the heat and the illuminating power of the lamp, thus adapting the same to burning different materials.

No. 30,195.—I. F. BLONDIN, of Niagara Falls, N. Y., assignor to himself, FRANK DOUGLAS of Norwich, Conn., N. H. SPOFFORD, of Boston, Mass., and J. B. HERNSHOOF, of Seekonk, Mass.—*Improvement in Skates*.—Patent dated October 2, 1860.—This invention relates to the construction and arrangement of side supports for the ankle and leg, in combination with a skate.

The inventor says: I *claim* the supports *E E* hinged or jointed to the heel, in combination with a skate, for the purposes substantially as described.

I also claim the arrangement of the adjustable bars *I*, screws *K*, swivel block *n*, plate *s*, and strap *L*, for the purposes described.

No. 30,196.—E. I. BODRIO, of St. Louis, Mo.—*Improvement in Machines for Drying Grain*.—Patent dated October 2, 1860.—The cylinders are heated with steam, and the steam is kept from condensing by the fire in the furnace *K*, on the outside of the cylinder, and by the introduction of super-heated steam or heated air in the inside of the cylinder, which also blows the musty smell out of the cylinder as it rises or dries out of the grain.

Claim.—The combination of the cylinders *B*, the pipes *r* and *v* and *y*, the diaphragm plate *o*, and the furnace *K*, the whole being arranged and operated substantially as described.

No. 30,197.—CHARLES K. BRADFORD, of Lynn, Mass.—*Improvement in Gaiter Boots*.—Patent dated October 2, 1860.—The claim and engravings explain the nature of this invention.

Claim.—In a gaiter boot, having a front and flap divided by a side opening, as shown, the holding up and fastening of said front and flap to each other and to the ankle of the wearer by means of the strap *B* fastened to said fore part and passing through a slot *f*, thence around the ankle and buckled to the flap *C*, as described and represented.

No. 30,198.—JEHU BRAINERD, of Cleveland, Ohio.—*Improvement in Rotary Harrows*.—Patent dated October 2, 1860.—This invention relates to feathering the harrow teeth by means of the peculiar form thereof and the manner in which they are secured to the frame of the harrow; the teeth have a partial rotation upon their own axis while revolving around the common centre of the harrow frame, the teeth having such a form that the portion which enters the soil as the harrow is drawn forward; upon one side of the frame the teeth adjust themselves at a greater distance from the common centre of the frame than do the teeth on the opposite side; this feathering or self-adjusting of the teeth upon greater and lesser circles causes the whole harrow to rotate.

Claim.—Feathering the teeth of a harrow, substantially as described.

No. 30,199.—W. E. BRIDGES and D. P. DIETERICH, of Cleveland, Ohio.—*Improved Hose Protector*.—Patent dated October 2, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The described hose protector, composed of two sheets of gum elastic, or other suitable flexible material, connected together at one end, the lower sheet being furnished with

transverse ribs *a a*, and the whole being constructed and applied substantially in the manner set forth, for the purpose specified.

No. 30,200.—RHODOM M. BROOKS, of Greenville, Ga.—*Improved Cotton Press*.—Patent dated October 2, 1860.—This invention consists in constructing and arranging the several parts of the machine.

Claim.—The arrangement of the box B, the trunnions *x*, projecting pieces *a a*, working in grooves or openings in the frame pieces A A, the head D, arms *d d*, block *c*, and screw E, with the frame pieces A¹ and A², and gear wheels F G, when the same are constructed and used as and for the purpose specified.

No. 30,201.—FERDINAND PHILIP EDWARD CARRÉ, of Paris, France.—*Improvement in Apparatus for Freezing Liquids*.—Patent dated October 2, 1860.—A description of this invention is too long for a place in this volume. The reader is referred to the specification and engravings.

Claim.—The general arrangement of apparatus described, for producing cold in manufacturing ice by chemical agents.

No. 30,202.—SAMUEL R. BRYANT, of Waterford, Pa.—*Improvement in Bee Hives*.—Patent dated October 2, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the rotating cap *b*, perforated at one side and fitted within a circular recess *d* at the centre of the bottom A of the hive, the bottom within the recesses having openings *e* made through it to form a ventilator, as set forth.

Second. Constructing the bottom A of the hive, elevated within the body, so as to form a ledge *j* for the parts C to close against, and having the outer part of the bottom inclined or bevelled and made horizontal beneath the parts C, for the purpose specified.

Third. Constructing the comb frames D with diagonal braces *m n*, and having the upper cross rails *a* grooved to form ledges or guides O for the combs, as set forth.

No. 30,203.—JAMES BROWN and LYMAN BRIDGES, of Chicago, Ill.—*Improved Furnace and Cooking Range*.—Patent dated October 2, 1860.—This invention consists in the arrangement of coils of hot water pipes at both sides of the removable ovens, in combination with a combustion chamber, hot air chamber, and coils of hot water pipes, all the parts constructed and connected together so as to accomplish the desired end.

Claim.—The arrangement of coils of hot water pipes N¹ N² at both sides of the reversible ovens B B, in combination with a combustion chamber G, hot air chamber D, and coils of hot water pipes P and P¹, all the parts constructed and connected, substantially as and for the purposes set forth.

No. 30,204.—CYRUS CHAMBERS, JR., of Philadelphia, Pa.—*Improved Copying Press*.—Patent dated October 2, 1860.—This invention consists in constructing a copying press, with the travelling platen working upwards, and operated by a toggle connected with a treadle controlled by the foot, so that the upper part of the press is left free to receive a top which can be used as an office table or stand, the whole forming an ornamental and convenient press.

The inventor says: I *claim*, first, the combined stand and press, constructed substantially as described.

Second. The combination of the bed toggle, platen, and treadle, for the purpose and substantially in the manner specified.

Third. The stops *m n o p* on the arms of the toggle, arranged and operating as specified.

Fourth. The lugs or stops *i* on the platen F to determine the position of the book in the press.

Fifth. The combination of the mortise and screw, for the purpose set forth.

Sixth. Casting the column, frame, and bed, in one piece, in the manner described and shown.

No. 30,205.—FRANCIS J. COLLIER, of Philadelphia, Pa.—*Improved Label Holder*.—Patent dated October 2, 1860.—This invention consists of a metal casing for holding a label of paste-board or other suitable material, the said casing having retaining flanges, recesses, and openings, so that the label may be effectually retained within the holder, readily removed therefrom, reversed and reinserted therein.

Claim.—The described label holder having the end retaining flanges *e* and *e*¹, the curved slide flanges *f* and *f*¹, the recesses *y y*, and openings *m* and *n*, arranged substantially as and for the purpose set forth.

No. 30,206.—JAMES P. COLLINS, of Troy, N. Y.—*Improved Hanger for Shafting*.—Patent dated October 2, 1860.—The object of this invention is to obtain a bearing of simple construction which will have a universal adjusting movement, and at the same time be properly supported at all points, so as to admit of belts being applied to the shafting in any direction.

The inventor says: I *claim* the combination, with the shaft box F, trunnions g, and adjusting screws h, of the shell D, arm E, rod C, curved plate B, arbor b, screw c, and frame A, in the manner and for the purpose shown and described.

I also claim the peculiar arrangement of the cap G, with the trunnions and the rod C, as and for the purpose shown and described.

No. 30,207.—JOHN COMMINS, of Charleston, S. C.—*Improvement in Saddles*.—Patent dated October 2, 1860.—This invention consists in attaching to the front part of a saddle a bar which extends outward from the saddle at either side in such a manner that a fowling piece or rifle may be suspended thereto, the bar admitting of being turned so that it as well as the rifle or other fire-arm cannot serve as an obstruction in passing through underbrush; the bar also may be used as a means for supporting an umbrella, when necessary.

Claim.—The bar B, attached to a saddle, essentially as and for the purposes set forth.

No. 30,208.—JAMES COOPER COOKE, of Middletown, Conn.—*Improved Machine for Sharpening Tools*.—Patent dated October 2, 1860.—This invention consists of a machine whose principal elements are a hone carriage and a tool holder, said carriage having a reciprocating rectilinear motion in a direction parallel, or nearly so, to the edge of a tool, and a gradual or step by step movement in a transverse direction, and the tool holder being applied in a peculiar manner relatively to the said bed, so that the tool may rest upon the hone at any required inclination to the face thereof, according to the degree of bevel desired.

Claim.—The combination of the reciprocating carriage B and the transversely moving hone bed C with the tool stock L, by means of a bar M applied, and having the tool stock fitted to it, substantially as and for the purpose described.

No. 30,209.—J. D. CUSTER, of Norristown, Pa.—*Improved Saw Grinding Machine*.—Patent dated October 2, 1860.—This invention consists in constructing a wheel of proper diameter and face to admit of bending and laying the saws on the face of the wheel and fastening them with bevel headed hooks, so as to hold them tight on the face of the wheel, while it revolves, in contact with a revolving traversing grindstone, or polishing wheel, or polishing belt.

Claim.—The slotted wheel K, constructed as described, and operated in connection with the hook P and pin N, in front of a traversing grindstone, for grinding and polishing saws, as set forth.

No. 30,210.—JEAN DE LIHATCHEFF, of Yaroslavl, Russia.—*Improved Machine for Planing Staves*.—Patent dated October 2, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Supporting the frame or table carrying and presenting the staves to the planing tools, and at various parts of its length, upon a series of eccentrics mounted upon shafts having pinions at their extremities, each and all of which are operated by means of one common transverse shaft provided with a worm or endless screw, as set forth and for the purpose and purposes specified.

No. 30,211.—D. B. DORSEY and E. MATHERS, of Fairmount, Va.—*Improvement in Setting Type*.—Patent dated October 2, 1860.—The object of this invention is to facilitate the handling of composed matter without danger of knocking it into pi. To do this the inventor proposes to set up the type in a permanent galley, where it shall remain until distributed. To this galley are added movable and justifying rules.

Claim.—The employment of a permanent column galley A, arranged with end rules a b, and with a justifying rule B, substantially as and for the purpose set forth.

No. 30,212.—J. B. DUANE, of Schenectady, N. Y.—*Improvement in Seeding Machines*.—Patent dated October 2, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement of the toothed bars b b, and perforated plates h i, outside or in front of the hopper G, substantially as and for the purpose specified.

Second. The adjustable board N, placed relatively with the shake board M, harrow O, and drags Q, to operate as and for the purpose set forth.

Third. The arrangement of the lever frame D, roller E, bars b b, shaft B, and castor wheels C C, substantially as shown and described, for the purpose set forth.

Fourth. The combination of the vibrating board M, hopper G, with the reciprocating

agitators *l l*, the seed box *S*, harrow *O*, drags *Q*, frame *D*, with roller *E*, attached and connected to the shaft *B* by the rods *b*, all arranged for joint operation, as set forth.

No. 30,213.—JOSEPH T. EICHBERG, of New York, N. Y.—*Improved Parasol and Fan*.—Patent dated October 2, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, arranging the handle of a parasol, substantially as described, so that a portion of the same can be taken off at pleasure and used as a fan.

Second. Arranging the fan *D*, which forms the end of the handle *B* of a parasol, with folding sides of a tapering form, substantially as set forth, so that the same, when closed, forms a case which protects the fabric of the fan, and which produces a good and convenient hold for the hand.

No. 30,214.—ISRAEL FORMAN, of Grafton, Va.—*Improved Culinary Apparatus*.—Patent dated October 2, 1860.—This invention consists in constructing a chest or chamber in such a manner that it will hold water in its bottom for the generation of steam, and also articles to be cooked on racks in it; and also in having a movable sliding door.

Claim.—The chest or box *A*, with an inclined top water receptacle in its bottom, and provided with a movable sliding door *B*, flanges *a*, shelves *C C*¹, and otherwise constructed and arranged as and for the purposes set forth.

No. 30,215.—THOMAS N. FOSTER, of Watertown, N. Y.—*Improvement in Harvesters*.—Patent dated October 2, 1860.—This invention consists in the arrangement of a frame mounted on wheels, and carrying a lower frame, which is hinged to it behind the carrying axle, applying a tongue or pole to the upper frame and the draught rod to the lower frame, so as to allow both frames to vibrate freely, and hanging or hinging the cutter bar and platform to the lower frame.

Claim.—The arrangement of the three hinged frames *N N*¹ *A* and *B*, with their hinges, in relation to each other, the axle *A*², and inner driving wheel *A*³, in combination with the rigid and flexible draught connection *D D*¹, operating jointly in the manner and for the purpose described.

No. 30,216.—ADONIRAM J. FULLAM, of Springfield, Vt.—*Improved Stencil Printing Machine*.—Patent dated October 2, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A stencil printing or marking machine, as composed of a rotary brush *C*, or its equivalent, a stencil plate *D*, and a sheet supporter or carriage *B*, combined together, and with mechanism for rotating the brush, or for revolving it and moving the sheet supporter or carriage, substantially as and for the purpose specified.

No. 30,217.—JAMES P. GAY, of Cincinnati, Ohio, assignor to himself and DAVID C. KING, of said Cincinnati.—*Improvement in Composition for Roofing Purposes*.—Patent dated October 2, 1860.—The following are the various ingredients and proportions that compose this composition: Eighty parts, by weight, of Carolina pitch, eighty parts of candle pitch, three parts of flour of sulphur, eight of linseed oil, three of litharge, eighty of naphtha, three of gutta percha, and three of caoutchouc.

Claim.—The composition described, consisting of the various ingredients in the proportions named, or similar proportions, substantially as and for the purpose described.

No. 30,218.—PORTER A. GLADWIN, of North Providence, R. I.—*Improved Sash Fastener*.—Patent dated October 2, 1860.—This improvement consists in constructing the stop as a part of a lever, the whole constituting one piece, and in the combination of the lever, locker, and spring.

The inventor says: I *claim* a lever with a curved end *k*, or its equivalent, moving eccentrically on a pivot, constructed and operating substantially as described, for the purposes specified.

I also claim the combination of such a lever with a locker and spiral spring, or their equivalents, constructed, arranged, and operating substantially as described, for the purposes specified.

No. 30,219.—ISRAEL GRAFUIS, of Alexandria, Pa.—*Improved Portable Fire Escape*.—Patent dated October 2, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A portable fire escape, constructed of a folding frame *A*, covered by an elastic sheet *B*, and cushion *C*, and having its edges protected by a stout elastic tube *D*, and operating in the manner and for the purpose set forth.

No. 30,220.—ROBERT HARPER, of Trumbull, Ohio.—*Improvement in Tanning*.—Patent dated October 2, 1860.—The following named ingredients compose the article used in this invention: Worm seed, thoroughwort or boneset and golden root, to be used in connection with japonica, alum, and saltpetre; a liquor to be made by steaming the weeds together in equal proportions, then adding the japonica, alum, and saltpetre, in the proportions of fifty pounds of japonica, ten pounds of alum, and one pound of saltpetre, to two hundred pounds of the above named weeds or plants when dry.

Claim.—The use of the above mentioned weeds, in combination with the aforesaid drugs, in the proportions named, thereby facilitating the process of tanning, as well as being much cheaper than the usual process of tanning with bark.

No. 30,221.—JOHN HOLMES, of St. Clair, Pa.—*Improvement in Pumps*.—Patent dated October 2, 1860.—The following is the operation of this invention: The rod D^1 draws or pulls the frame C in the direction indicated by the arrow, and raises the truck D, and consequently draws up the plunger rod F^1 , the pipe H and pump cylinder filling with water as the frame C moves in the reverse direction, and then the truck D descends by its own gravity forcing the water drawn up by the previous upward movement of the plunger rod up through the pipe I; the frame C may have a weight attached to it to counterpoise the truck D.

Claim.—The arrangement of the loaded truck D, rod F, plunger rod F^1 , with the pump G, chain E, frame C, and rod D^1 , as and for the purposes set forth and described.

No. 30,222.—S. J. HOMAN, of Walden, N. Y.—*Improvement in Hay Rakes*.—Patent dated October 2, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Attaching the rake tooth to the axle C, and mounting the thills on the hubs of wheels A A, and the driver's seat on the thills, substantially as and for the purposes set forth.

No. 30,223.—C. B. HURXTHAL and JOHN LEE, of Bolivar, Ohio.—*Improvement in Gates*.—Patent dated October 2, 1860.—In operating this gate, as the driver approaches it, he extends his hand, and grasping the handle f throws it up, as it goes up the arms e , at the end of the operating lever E, operate the rods c , thereby unlatching the gate by sliding back the latch slat C, at the same time the operating lever E, by its attachment to the main pivot F, throws up the balance gate, the slats of which fold up and assume a vertical position.

Claim.—The arrangement of the inclined standard B, slots C and C^1 , spring a , levers E, and fixed bearing F, and weight b , the whole operating as set forth.

No. 30,224.—WILLIAM HUMPHREYS, of Cold Spring, N. Y.—*Improvement in Rotating Engines*.—Patent dated October 2, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the annular arrangement of the recesses e , in the cylinder B, in combination with the flanges c c^1 , on the piston C, and with the cylinder heads or covers i , constructed and operating substantially as and for the purpose described.

Second. The arrangement of the adjustable packing plates k , in the ends of the sliding abutment D, constructed and operating substantially as and for the purpose set forth.

Third. The arrangement of the abutment D, in the interior of a closed box E, in combination with the pipe e^2 , constructed and operating substantially in the manner and for the purpose specified.

Fourth. The arrangement of the hand rock shaft r^2 , with eccentric rollers v v^1 , and a pinion i , in combination with the valve t t^1 , and eccentrics I I^1 ; the whole constructed, combined, and operating as and for the purpose described.

No. 30,225.—JOSEPH HARVEY and EDWIN FORD, of Philadelphia, Pa.—*Improvement in Handles for Canes, &c.*—Patent dated October 2, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The art, process, or mode of making handles, shown and described, consisting substantially in the employment of forms or models composed of tapering angles and the providing of the sections of which the handle is to be composed, with tapered apertures, and the fitting of said sections upon said tapered angles; all as set forth and represented.

No. 30,226.—W. F. JOHNSON, of Philadelphia, Pa., and J. DOYLE, of Wetumpka, Ala.—*Improvement in Sugar Cane Harvesters*.—Patent dated October 2, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim*, first, the double axle C, or an axle formed of two parts a a , connected by a clasp E, or its equivalent, in connection with the right and left screw shaft F F, fitted in the parallel beams A A, to which the parts a a of the axle are attached, for the purpose of admitting of the lateral adjustment of the cutters O, to suit the width of the space between the rows of canes, as set forth.

Second. The employment or use of the cutters O, and knives T, when placed on shafts T R, and used in connection with leger blades *m*, beaters S, and guide rods W, for the purpose of cutting simultaneously, the cane at top and bottom, as described.

Third. The arrangement of guide rods X, and pendant curved rods Z, in connection with the discharging levers B¹, substantially as shown, for the purpose of allowing the cut cane to be discharged from the machine in gavels, as set forth.

Fourth. The arrangement of the sliding shafts L, with slides or bearings *f*¹, levers *h*, and shafts M, substantially as shown, to admit, when necessary, of the cutters O, as well as the knives T, being readily thrown out of gear, and the cutters O, at the same time, elevated.

No. 30,227.—WILLIAM H. JOHNSON, of Richmond, Ark.—*Improvement in Cotton Cleaners*.—Patent dated October 2, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination, with a cotton gin, of an inclined flue, having a continuous slotted bottom with curved tapering passages through it, and the fan beaters; said parts being arranged and operating, relatively to one another, substantially as and for the purposes set forth.

No. 30,228.—FREDERICK JONAS, of McConnel's Grove, Ill.—*Improvement in Breech Loading Fire Arms*.—Patent dated October 2, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the connection of the barrel C, with the frame A, by means of a spring D, applied as described, to serve both as a flexible joint and as a means of returning the barrel to its position for firing, substantially as described.

Second. The arrangement of the cocking lever K, in combination with the trigger guard lever E, substantially as described, to provide for the operation of the said lever K, either by or independently of the trigger guard lever.

No. 30,229.—JOEL F. KEELER, of Cleveland, Ohio.—*Improvement in Freight Car Locks*.—Patent dated October 2, 1860.—This invention relates to the form and structure of the lock, by means of which the key hole can be sealed up, either before or after locking, being self-acting, that is, it can be locked without the use of the key and without breaking the seal.

Claim.—The spring lock and hasp, in combination with the provisions for sealing the escutcheon, as described.

No. 30,230.—JOHN KOPPE, of New York, N. Y.—*Improvement in the Glass or Metal Harmonicon*.—Patent dated October 2, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Producing a scale of tunes, hanging the plate A, of a pianoforte upon two threads *n u*, passing over two rows of pins *e*, in such manner that each end of each plate A shall be supported between two inclined portions *n*¹ *n*¹, of thread *n*, for the purposes described.

No. 30,231.—SALEM T. LAMB, of New Washington, Ia.—*Improvement in the Cutting Apparatus of Harvesting Machines*.—Patent dated October 2, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A cutting apparatus composed of the following elements, viz: a guard hollow above and below the cutter blades, opening above, below, and in rear of the cutter bar, and flanges on top, extending in a curve forward to the cutters and laterally to each other, to form a line in close proximity with the cutter blades and a cutter bar, supported on all four sides on independent bearers; all substantially as and for the purpose described.

No. 30,232.—HENRY S. LESHER, of Brooklyn, N. Y.—*Improvement in Diaper Pins*.—Patent dated October 2, 1860.—This invention consists in combining, with a circling pin jointed to the end of a tube made in the form of a segment of a circle corresponding with the circle of the pin, in the opposite end of which the sharpened end of said pin enters, a spring hook bar, which extends to and hooks on the portion of the pin directly opposite, in such a manner as to enable the pin to be secured in place when passed through the portions of the diaper required to secure the same, with its sharpened end or point sheathed in the tube.

Claim.—Combining with the pin A, and tube B, jointed together as described, the cross hook bar C, or its equivalent, for holding the point of the pin A, in place within said tube, substantially as set forth.

No. 30,233.—DE WITT C. LOCKWOOD, of Derby, Conn.—*Improvement in Martingale Rings*.—Patent dated October 2, 1860.—This invention consists in interlocking with one or both sides of the ring its metallic lining.

Claim.—As a new article of manufacture, a martingale ring having its metallic lining interlocked with its sides, substantially as and for the purpose described.

No. 30,234.—CHARLES B. LONG, of Worcester, Mass.—*Improvement in Planing Valve Seats of Steam Engines.*—Patent dated October 2, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the arrangement and combination of the carriage B, and its feeding mechanism with the supporting frame A, the cutter carriage F, and its mechanism for imparting to it reciprocating longitudinal movements, as described; the whole being substantially as and for the purpose specified.

I also claim the combination and arrangement of the parts for operating the screw H, for effecting the reciprocating movements of the cutter carriage F, such parts being the two tubular shafts K L, the clutch P, the pitman or slide rod R, the bifurcated lever S, the weighted lever T, and its shouldered rod V, and the bent arm U; the whole being applied to the set screw and to the two carriages B and F, and the tubular shafts K L being geared to the driving shaft, substantially as described.

No. 30,235.—FREDERICK H. MANNY, of Rockford, Ill.—*Improvement in Harvesters.*—Patent dated October 2, 1860.—This invention consists in so arranging the frame timbers upon which the platform rests, with respect to the finger beam and main frame, as to diminish the distance between the front and rear of the frame.

Claim.—The arrangement of the beams *a b c d*, relatively to the finger beam and main frame, and to each other, substantially as described, for the purpose set forth.

No. 30,236.—NATHANIEL HENRY McLEAN, of the U. S. Army.—*Improved Window Curtain Fixture.*—Patent dated October 2, 1860.—This invention consists of a case A B C D, in which work a large wheel or roller 1, two small wheels or rollers 2 and 3, a sliding carriage E F G H, a spring S, and a rod R.

Claim.—The large wheel or roller 1, and the two wheels or rollers above it, 2 and 3, the sliding carriage E F G H, the spring S, and rod R, when arranged and combined, substantially as and for the purpose specified.

No. 30,237.—LEVI J. MASTERSON, of Newton, Mass.—*Self-adjusting Skate.*—Patent dated October 2, 1860.—This invention consists of a skate, the spring of which is locked in position on the runner by the downward pressure of the foot, when the skate is applied to the foot and in combination therewith, of adjustable toe clamps for holding the front part of the boot to the skate, which clamps are drawn backward and tightened to the foot by the descent of the heel part of the foot piece.

The inventor says: I *claim*, first, the spring foot piece C J B, locked to the runner A, by the pressure of the foot, substantially as set forth.

Second. I claim the clamps E, operated by the descent of the heel piece C, substantially in the manner described.

No. 30,238.—A. C. McNULTY and D. LYMAN, JR., of New York, N. Y.—*Improved Kaleidoscope.*—Patent dated October 2, 1860.—The nature of this improvement is shown by the claim and engravings.

Claim.—The arrangement of two or more pairs of kaleidoscopic mirrors A, in one case B, substantially as and for the purpose set forth.

No. 30,239.—DAVID M. MEFFORD, of Jeffersonville, Ind.—*Improvement in Machines for Stemming Corn Husks.*—Patent dated October 2, 1860.—This invention has for its object the effective and economical separation from corn shucks of the hard portion at the base of the blades, commonly called "the stub" or but, and consists of a series of toothed and corrugated cylinders, guard and stripper.

Claim.—The combination of the toothed picker B, gripping cylinder G, and guard J, operating in the manner and for the purposes set forth.

No. 30,240.—CHARLES R. OTIS, of Yonkers, N. Y.—*Improvement in Oscillating Engines.*—Patent dated October 2, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The employment, in combination with a steam chest, arranged at one side of the cylinder of an oscillating engine, and having the bearing of one trunnion resting upon it, of two arms G G, secured to the said chest, for the purpose of supporting the opposite trunnion, also, from the steam chest, substantially as described, for the purpose set forth.

No. 30,241.—E. G. OTIS, of Yonkers, N. Y.—*Improvement in Oscillating Engines*.—Patent dated October 2, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement of the steam chest B, containing the two sets of passages $d^* d^1 d^1 d^2 d^2 e^* e^1 e^1 e^2 e^2$, in such a manner as to constitute the main framing of the engine, that is to say, as to support the bearings of the main shaft, and of one trunnion of each cylinder, substantially as described.

Second. The arrangement of the steam chamber n in the bed plate, in communication with cavities in the standards F F, for supporting the outer trunnions, whereby the outer trunnion bearings are caused to rise and descend with the inner ones, as the latter rise and descend with the expansion of the steam chest B.

Third. The springs L L, applied to the outer trunnions, substantially as and for the purpose specified.

No. 30,242.—AUGUSTE PELLET, of Paris, France.—*Process of Ornamenting Leather Cloth*. Patent dated October 2, 1860.—The claim explains the nature of this invention.

The inventor says: I *claim* the peculiar succession of operations to secure the firmness and durability of the ornaments, consisting of, first, ornamenting the unvarnished tissue with colors that sink to the surface thereof, and then varnishing and rolling the same to complete the operation; and this I claim as my invention, for the purposes set forth.

No. 30,243.—MALTBY K. PELLETREAU, of New York, N. Y.—*Improvement in Bookbinders' Standing Presses*.—Patent dated October 2, 1860.—This invention consists in mechanism for locking and unlocking the cylinder, and also in furnishing the front part of the frame with a projection extending in a rearward direction, and surrounding the cylinder axis pin in front of the cylinder, and having the part above the said pin made V-shaped and sharp edged, for the purpose of scraping from the front of the cylinder any dirt that may result from the firing of the charges, and preventing such dirt finding its way between the cylinder and pin, and clogging the operation of the cylinder.

The inventor says: I *claim* the arrangement of the guide rack bars G, pinions E E, shaft D, worm wheel L, screw C, and shaft M, with the followers A³ I, and top and bottom plates A A, as shown and described, whereby the press is strengthened, the followers guided, and the lower follower quickly adjusted, all as set forth.

No. 30,244.—WILLIAM PHELPS and CLARK WRIGHT, of Sycamore, Ill.—*Improved Washing Machine*.—Patent dated October 2, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The described arrangement of a smooth board G, and a corrugated rubber H, fixed obliquely in opposite outside corners of each of a series of chambers mounted on the extremities of revolving arms; the said parts being constructed and combined in the manner and for the purposes set forth.

No. 30,245.—E. A. PRESCOTT, of Worcester, Mass.—*Improvement in Revolving Fire Arms*. Patent dated October 2, 1860.—This invention consists in the peculiar arrangement of a smooth board and corrugated rubber, fixed obliquely in opposite corners of each of a series of chambers, mounted on the extremities of revolving arms to increase the efficiency of the machine.

The inventor says: I *claim* the combination of the lever-like locking dog G, elbow-shaped unlocking lever H, and the stud l ; the whole applied and operating, in connection with and relatively to the hammer, substantially as specified.

And I further claim the rearward projection on the front part of the frame, having its upper part made V-shaped and sharp edged, as illustrated in Figs. 5 and 2, for the purpose specified.

No. 30,246.—ISAAC M. POTTER, of Providence, R. I.—*Improvement in the Manufacture of Sheet Metal Finger Rings, &c.*—Patent dated October 2, 1860.—This improvement consists in bending the blank, after it has been struck in a die, without first filling it with solder. For this purpose a metallic former 5 is used, the diameter of which is smaller than that of the ring to be made. The former has upon its surface the same figure or device that is upon the blank after it comes from the die, so that the elevations and depressions on the under surface of the blank will fit the corresponding elevations and depressions on the former.

Claim.—The use of a former Fig. 5 when used in the manner described, for the purposes specified.

No. 30,247.—GEORGE P. REED, of Roxbury, Mass.—*Improvement in Watches*.—Patent dated October 2, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The construction of a flat or cylindrical balance spring for a watch or other time

keeper, with an adjusting coil *a a* or *e e*, substantially as described, making at least one full turn around the the axis of the balance, but not forming a regular continuation of the coil of the spring.

No. 30, 248.—THEODORE M. RICHARDSON, of Stockton, Me.—*Improved Device for Securing Plane Bits*.—Patent dated October 2, 1860.—The throat *b* of the plane stock A, is furnished with a stationary cap iron or cutter bearing C, against the under side of which the cutter or plane iron D is arranged. The said plane iron is forced or clamped against the cap iron by means of a wedge E, a pitman F, an inclined plane G, and a screw H, arranged relatively to each other.

Claim.—The arrangement of the clamp wedge E, the pitman F, the inclined plane G, and the screw H, with the plane iron D, its cap bearing C, and the stock A, substantially as described.

No. 30,249.—CHARLES ROBINSON, of Cambridgeport, Mass.—*Improved Clothes Dryer*.—Patent dated October 2, 1860.—From the loose collar C, turning freely on the upper end of the rod B, is suspended, by a suitable number of elastic cords *ff*, a hub or ball D, which has an aperture through its centre sufficiently large to allow it to freely turn and slide on the rod. A convenient number of radial arms *d d* project horizontally outward any desirable distance. The collar C is supported by the pin *c*, and a knob *a*, or its equivalent, is attached to the lower end of the rod B to prevent the hub D from sliding off from the rod, and to support the same when its arms are loaded.

Claim.—The combination and arrangement of the rod B, with its catch *b*, hub D, with its radial arms *d d*, and the elastic cords *ff*, the whole forming an improved article of manufacture substantially as and for the purposes specified.

No. 30,250.—GEORGE SANFORD, of Providence, R. I.—*Improvement in the Manufacture of Bracelets*.—Patent dated October 2, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The improvement described in the method of making the half band for ladies' bracelets, and similar articles—that is to say, in forming both the outer and inner surfaces from a single piece of sheet metal, substantially as specified.

No. 30,251.—WILLIAM SCARLETT, of Aurora, Ill.—*Improvement in Biers*.—Patent dated October 2, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: First. I *claim*, in biers, constructed with windlasses for lowering the coffin, the arrangement of the longitudinal cords C C and cross supports D D, adapted to slide thereon, substantially in the manner and for the purposes set forth.

Second. I claim so arranging the cords C C and straps E E, or their equivalents, upon the windlasses B B¹, that a continued rotation of the latter lowers the coffin and then disengages the sliding supports D D, or their equivalents, therefrom, substantially in the manner above specified.

No. 30,252.—GEORGE W. SCOLLAY, of St. Louis, Mo.—*Improvement in Glass Coffins*.—Patent dated October 2, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, making a glass coffin, with the rib I near the upper edge thereof, and in combination with the flange *v*, to strengthen and stiffen the said flange and upper edge of the coffin, to serve as a basis for the lid to rest upon and as a handle to lift the coffin by.

Second. I claim making the upper edge of the body of the coffin and the lower edge of the lid thereof, with the flange and lateral grooves, in the manner described, for the purpose specified.

Third. I claim the use of a valve or cock, in combination with a coffin, arranged in the manner described, so that a pipe can be attached to exhaust the air out of the coffin, when said cock and coffin are of glass.

Fourth. I claim the use of the glass plugs *b*, (the head of which is shown in Fig. 2, by *b*,) for the purpose of uniting the lid to the body of a glass coffin more firmly than the cement would unite it unaided by the said plug.

No. 30,253.—JOHN P. SCUDDER, of Hightstown, N. J.—*Improvement in Potato Diggers*.—Patent dated October 2, 1860.—The claim and engravings explain the nature of this improvement.

Claim.—Constructing the elevator with a series of open or grated bottom radial chambers and corresponding series of open curved fingers *j*, which are caused to pass through a series of open fingers *k*, upon the digger, as set forth.

No. 30,254.—S. B. SEXTON, of Baltimore, Md.—*Improvement in Cooking Stoves and Ranges*.—Patent dated October 2, 1860; antedated September 17, 1860.—This invention consists in a certain arrangement in the construction of cooking ranges.

Claim.—The arrangement of chambers A B and C, and flues *a b c d e* and F, with the grate G, constructed as described.

No. 30,255.—HIRAM M. SHAFFER, of Bucyrus, Ohio.—*Improvement in Bee Hives*.—Patent dated October 2, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The within described miller and robber trap, constructed substantially in the manner specified, to wit: a box A, provided with a wire gauze cover and having two of its sides pierced with inclined holes D D, one of its sides provided with a sliding door and the other side provided with a flange or shelf, beneath and above which long openings are cut, the whole being arranged and used as and for the purpose set forth.

No. 30,256.—JAMES S. SILVA, of Savannah, Ga.—*Improvement in Ice Cream Freezers*.—Patent dated October 2, 1860.—This invention consists in the arrangement of a triangular hollow dasher, in combination with a scraper of corresponding form in the interior of the barrel, in such a manner that by turning the dasher its three corners scrape off the ice which may adhere to the inside of the barrel, and on moving the dasher up and down its sides are scraped off clean by the action of the scraper; by this arrangement the formation of the ice is considerably accelerated.

The inventor says: I *claim*, first, the arrangement of a triangular dasher C, in combination with the cylindrical barrel A, as described, so that in turning the dasher its corners serve to keep the inside of the barrel clear of ice.

Second. The arrangement of the scraper E, in combination with the hollow dasher C, constructed and operating substantially as and for the purpose set forth.

No. 30,257.—SAMUEL SLOCOMB, of Cambridge, Mass.—*Improved Inkstand*.—Patent dated October 2, 1860.—The claim and engravings explain the nature of this invention.

Claim.—In combination with a well and a hollow plunger, the projection *f*, formed of the same material and at the same time that the bowl of the inkstand is formed, and fitting into the opening *e* in the plunger, as set forth and represented, and for the purpose specified.

No. 30,258.—ERASTUS W. SMITH and JOHN H. MARS, of New York, N. Y.—*Improved Steam Boiler*.—Patent dated October 2, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the combustion chamber D, relatively to the two tiers of furnaces and to the flues, or their equivalents, whereby the gases from the upper tier of furnaces are drawn downward and mingled with those from the lower tier, in the middle and lower portion of the combustion chamber, and the agitation and combustion is allowed to proceed in the large flues along the bottom of the boiler, and the heat is extracted in a series of smaller flues or tubes, which makes a partial return of the draught and terminates in an uptake or equivalent connection H immediately behind the upper furnaces, substantially as set forth.

No. 30,259.—SAMUEL SOULE, of Cincinnati, Ohio.—*Improved Apparatus for Printing Addresses on Newspapers, &c.*—Patent dated October 2, 1860.—A represents a plate made of metal or other material, to which is secured a platen C; this platen is secured to the plate by means of a shaft D which passes through its rear end and which rests in suitable bearings upon the plate.

Claim.—The moving plate A, with platen attached, when used in connection with and made to traverse the forms in the chase, in this or any equivalent manner, for the purpose specified.

No. 30,260.—AUGUST SPELLIER, of Philadelphia, Pa.—*Improvement in Revolving Fire Arms*.—Patent dated October 2, 1860.—This invention consists of a spring, or its equivalent, connected to and arranged on the frame which carries the revolving breech, so that the fire-arm may be used for metallic cartridges, or ordinary charges.

Claim.—The spring I, or its equivalent, connected to and arranged on the frame B, in respect to the revolving breech and hammer D, substantially as specified.

No. 30,261.—CHARLES F. SPENCER, of Rochester, N. Y.—*Improved Hose Coupling*.—Patent dated October 2, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* my improved packing for hose couplings, consisting of the loose ring *f*, of India rubber, or its equivalent, in combination with the annular chamber *d*, for retaining the same in a position to readily impact with the end of the inserted section B by the force of the water passing through the hose, substantially as set forth.

I also claim, in combination with said packing ring, the groove i^1 , on the neck of tube B, and latch g, or its equivalent, substantially as and for the purposes specified.

No. 30,262.—GEORGE A. STEPHENSON, of Paw Paw, Mich.—*Improvement in Reapers and Mowers*.—Patent dated October 2, 1860.—This invention relates to an improvement in the metal harvester frame; its object is to secure lightness and economy in construction and a simple means of adjustment of the sickle-operating mechanism.

Claim.—The combination of curved loops D D, forming the main frame, with the finger bar B, cam wheel E, with its adjustable journal boxes and pins i i , when the parts are constructed, arranged, and operated as described.

No. 30,263.—JOHN A. STEWART, of Philadelphia, Miss.—*Improvement in Ploughs*.—Patent dated October 2, 1860.—This invention consists in the arrangement of an adjustable triangular point, perforated cutter, and landside, also perforated and adjustable, and the mould board of a plough.

Claim.—The arrangement of an adjustable, triangular point C, perforated at J^1 J J^1 , cutter and landside D, also perforated and adjustable, and mould board A of a plough, the whole constructed substantially as and for the purposes set forth.

No. 30,264.—THOMAS T. STRODE, of Mortonville, Pa.—*Improvement in Adding Machines*.—Patent dated October 2, 1860.—This invention consists, first, in the combination with the registering apparatus, of a platform, provided on one end with a stationary guide strip, and on the other with an adjustable slide, so that it can be conveniently adjusted to the size of the account book with which it is to be used; second, in the arrangement of a notched slide in combination with a platform and the registering apparatus, so that by adjusting said slide the row of figures to be added is kept before the eyes of the accountant.

The inventor says: I *claim*, first, the combination of a registering apparatus A with the platform C and V-shaped guide strips E E^1 , constructed and operating substantially as and for the purpose described.

Second. The arrangement of the notched slide D, in combination with the registering apparatus A, constructed and operating substantially in the manner and for the purpose set forth.

No. 30,265.—DARWIN TALBOT, of Ironton, Mo.—*Improvement in Saws*.—Patent dated October 2, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Combining alternate short and long teeth, when the former are narrower at their cutting points than the latter, both being made as hereinbefore described.

No. 30,266.—WILLIAM H. TOWERS, of New York, N. Y.—*Improved Inkstand*.—Patent dated October 2, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Combining, with the body or reservoir A of the inkstand, having a circular opening C in its top and a groove F around its periphery, a correspondingly perforated turning cover B, having lugs E on its rim, which move in said groove substantially in the manner and for the purpose set forth.

No. 30,267.—PHILIP ULMER, of Charlestown, Mass.—*Improved Bed Bottom*.—Patent dated October 2, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination and arrangement of the rubber webbing, the steel spring, the wood slat, and the leather strap, by which one length slat may be made adjustable to bedsteads of various lengths, substantially as and for the purpose specified.

No. 30,268.—PIERRE D. VAN HOESSEN, of New York, N. Y.—*Improvement in Wagon Wrenches*.—Patent dated October 2, 1860.—This invention consists in the arrangement of a revolving head, with holes of different sizes in its sides, in combination with a rotary handle, in such a manner that the different sides of the head can be brought to face the nut or screw to be operated upon, and that by the different sizes of the holes provision is made for the different sized screw heads or nuts on a wagon.

The inventor says: I *claim*, first, the arrangement of the revolving head A, provided with holes b of different sizes, in combination with the rotary handles D, constructed and operating substantially as and for the purpose specified.

Second. The combination, with the revolving head A and handle D; of an additional stationary handle or supporter E, constructed and operating substantially as and for the purpose set forth.

No. 30,269.—HENRY G. WILDEY, of Philadelphia, Pa.—*Improvement in Animal Traps*.—Patent dated October 2, 1860.—The operation of this trap is as follows: The animal enters

the box A through the hole B, and its weight carries down the shelf B and raises the weight J, opening the hole B¹ and closing the hole B by piece D¹; the light then attracts the animal into the cage C, when the weight J will raise the shelf and close the hole B¹; the parts will then be set again for another.

Claim.—The arrangement of the movable shelf D, box K, cover L, and sliding doors J D¹, with the rods E g and weighted lever E, as and for the purposes set forth and described.

No. 30,270.—JONATHAN WARREN, of Brooklyn, N. Y.—*Improved Pen Cleaner.*—Patent dated October 2, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A pen cleaner constructed of a bottle A, with an inclined spout and with a curved back, and being provided with a brush B, which is retained by a notch c under the neck of the bottle, as described.

No. 30,271.—MAURICE VERGNES, of New York, N. Y.—*Improved Electro-Magnetic Helix.* Patent dated October 2, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* constructing a helix of a number of separate wires, when each of such wires is so arranged or coiled as to form a double lay, substantially as described, each lay lying against or in contact with the other, but not crossing it, and when such wires are so connected with each other, as described, that the section of the helix, at right angles with the axis of its core, shall be increased as the distance from the battery is increased, such section being the greatest in the middle of the helix.

I also claim, in combination with a helix, the use and application of the armature or iron plates k k¹, substantially as described, for the purpose of increasing the power of the helix.

No. 30,272.—MAURICE VERGNES, of New York, N. Y.—*Improvement in Electro-Magnetic Engines.*—Patent dated October 2, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement of a series of electro-magnets disposed as the radii of a wheel, on a common centre or axle, and revolving within stationary helices, and the polarization of which revolving magnets is constantly changed, as described, so that all such magnets shall have a like polarization when passing through one end of the helices, the polarization of which helices remains continually the same.

I also claim the general arrangement of the whole apparatus, substantially as and for the purposes set forth and described.

No. 30,273.—JOHN A. VEATCH, of San Francisco, Cal.—*Improved Gold Separator.*—Patent dated October 2, 1860.—This invention consists in the use of a rotating disk, annular trough, and a cup, by which the desired end is obtained.

Claim.—The rotary disk D, with or without the trough C, in connection with a cup E, communicating with the disk by a perforated space e, substantially as and for the purpose specified.

No. 30,274.—JOHN J. WATSON, of Buffalo, N. Y.—*Improved Water Wheel.*—Patent dated October 2, 1860.—The claim and engravings explain the nature of this invention.

The inventor says; I *claim*, first, the wheel C, consisting of a series of buckets made and placed substantially in the form and position herein represented, together with the cylinder G, and its arms H H and collar I, as set forth.

Second. The lower wheel, as constructed, revolving independently in the cylinder G, and used separately or in connection with the wheel C, when the whole are constructed and arranged to operate substantially as specified.

No. 30,275.—HENRY WILKINS, of Brownsville, Pa.—*Improvement in Furnaces for Steam Boilers.*—Patent dated October 2, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of two furnaces or fires, separated by a division wall, with a return flue arranged as described, so that the smoke and products of combustion from one fire, after traversing its furnace, are caused to pass over the other fire, previous to their escape into the chimney, for the purpose set forth.

No. 30,276.—McCLINTOCK YOUNG, JR., of Frederick, Md.—*Improvement in Reaping and Mowing Machines.*—Patent dated October 2, 1860.—This invention relates to the combination of certain devices for the purpose of connecting or disconnecting the cutting apparatus to or from the gearing of a harvesting machine.

Claim.—The combination of the self-acting spring clutch lever G with the loose driving wheel D, and fast gear wheel E, for making a self-acting clutch, substantially in the manner and for the purpose described.

No. 30,277.—WILLIAM T. ANDERSON, of Brooklyn, N. Y., assignor to himself and H. S. ARCHER, of said Brooklyn.—*Improvement in Binding Engravings, &c.*—Patent dated October 2, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The construction and arrangement of the sheets with joints or hinges at graduated distances from the back of the cover, increasing from the sides towards the middle of the book, so that the inner leaves will fold over those outside of them without breaking or coming loose from the cover, as described.

No. 30,278.—EDWARD H. GRAHAM, of Manchester, N. H., assignor to BENJAMIN H. WHITCOMB, of Henniker, N. H.—*Improvement in Skates.*—Patent dated October 2, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* hinging the fore end of the toe pad to the runner, so that it may be vibrated and adjusted to the height of the heel of the boot or shoe, as required.

And, in combination with a toe pad hinged to the runner, as above claimed, I claim the screw D, or its equivalent, for adjusting and supporting the rear end, substantially as described.

I claim fastening the heel pad to the runner by means of the dovetailing score E, groove H, and screw F, substantially as described.

No. 30,279.—FREDERICK MATHUSHEK, of New York, N. Y., assignor to himself and WASHINGTON WELLS, of said New York.—*Improvement in Piano Fortes.*—Patent dated October 2, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination and arrangement of the cross bars 13, the wrest plank bar 5, the wrest plank 4, the string plate 9, and the interior braces and bolts forming the frame work of the piano forte, substantially as set forth.

Second. The mode of arranging the strings of a piano forte, in combination with the arched or concave sounding board, so as to make a tension or pressure of the strings against the arch of the board, and in the same direction with the stroke of the hammers, substantially as described.

Third. The wrest plank bar 5, with the arrangement of the inverted bridge 8, or its equivalent, and of the strings thereon, in combination with said bar and the wrest plank and cross bar, substantially as described.

No. 30,280.—C. WATSON, of Cascade, Va., assignor to himself and A. H. TINSLEY, of said Cascade.—*Improvement in Harrows.*—Patent dated October 2, 1860.—The inventor says: From a description of this machine, it will be seen that the harrow is composed of but few parts, but one toothed wheel being used, and a single adjustable weight, which does not require to be very heavy in order to be efficacious, on account of the leverage obtained in connecting it with the upper part of the axle E.

Claim.—The arrangement of the box I, arm z^1 , rotary collar H, upright axle E, brace G, beam F, hub A, and arms B, all as shown and described, for the purposes set forth.

No. 30,281.—E. R. SHEPARD, of Scranton, Pa., assignor to ABEL BAKER, of Carbondale, Pa.—*Improvement in Blind Hinges.*—Patent dated October 2, 1860.—This invention consists in a particular manner of attaching the endless screw and the head, which serve for operating the hinge, to their respective guide plates by means of double nosed flanges, whereby is used a connection rod, which is placed quite loosely into the sockets in the screw and in the head, the length of which can be adjusted according to the thickness of the casing through which it passes.

The inventor says: I *claim*, first, arranging the flanges $g g^1$ in the head D, or on the screw d with two noses m , in the manner and for the purpose set forth.

Second. Arranging the head and the screw d in such a manner that the connection rod F can be placed quite loosely into the sockets $j j^1$, as and for the purpose specified.

No. 30,282.—FRANCIS B. ABBOTT, of St. Louis, Mo.—*Improved Quartz Crusher and Amalgamator.*—Patent dated October 9, 1860.—The frame of this machine consists of a bed plate A and four upright columns B; the said columns are made hollow, and bolted to the bed plate by means of link bolts passed through the column; between each pair of columns the braces Y Y and W W are fixed to secure the said columns to each other, and to serve as guides for the stamping rods. R^1 is a steam boiler with the ordinary mountings attached; and G is a steam pipe leading from the boiler to the engine to supply it with steam. H is the exhaust pipe leading from the engine to the heater R, fixed upon the upper end of the two inside columns.

The inventor says: I *claim*, first, the use of the heater R, in combination with the boiler and crusher, when arranged in the manner described for the purpose specified.

Second. I claim constructing, arranging, and operating the amalgamator, substantially in the manner described for the purpose specified.

Third. I claim arranging the engine and boiler with the crusher and amalgamator, substantially in the manner described, for the purpose of economizing in the room, weight, and cost of quart crushing apparatus.

No. 30,283.—A. LEMUEL ADAMS, of Philadelphia, Pa.—*Improved Apparatus for Copying Letters*.—Patent dated October 9, 1860.—This improvement consists in the use of movable retaining hooks, or their equivalent, for retaining the roller after the papers have by its aid been rolled up in the folds of the apron, thereby relieving the operator from the necessity of holding the rollers in the desired position while the copy is produced.

Claim.—The employment of the retaining hooks *d d*, or their equivalents, in combination with the roller B and its apron C, whether the said roller and apron are used in connection with the board A, or are applied directly to a copying book, as set forth.

No. 30,284.—JOSIAH ASHENFELDER, of Philadelphia, Pa.—*Improvement in Transferring Railroad Cars from one Track to Another*.—Patent dated October 9, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The employment, in connection with the sidings or turnouts of railroads, of a supplementary inclined rail, in combination with car wheels, so constructed in respect to said supplementary rail, which is so arranged in respect to the rails of the straight and of the deviating line of road, that the wheels are moved from the influence of the rails of the one line of road to that of the other, as described.

No. 30,285.—HENRY BEAMER, of Smithburg, Pa.—*Improvement in Fruit Dryers*.—Patent dated October 9, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, in combination with the drawers or trays E, the double inclined hinged covers B B, and hinged gables C C, arranged as represented, so as to protect or expose said trays, in the manner and for the purpose set forth.

I also claim, in combination with the drying chamber, the hinged frames E, that may be swung into or out of said chamber, for the purpose of protecting or drying by artificial heat inside, or exposing the fruit to the air or sun, as circumstances may require, and as set forth.

No. 30,286.—AARON BECHTOL, of Berkley Spring, Va.—*Improved Bedstead Fastening*.—Patent dated October 9, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The bed posts mortised as described, in combination with a bed frame mortised in a corresponding manner, so that the two ends of the frame may be supported across their entire width by means of transverse rails, and the posts and frame held together by means of adjustable dogs or buttons, substantially as and for the purposes set forth.

No. 30,287.—JAMES ARLINGTON BENNET, of Kings County, N. Y.—*Improvement in Propelling Cars on Railroads*.—Patent dated October 9, 1860.—In this machine there are 16 cog wheels, 8 inside and 8 outside of the sides of the car, and two small wheels fixed on the axle as at S. A lever on each side will wind up the whole, equal to fifty horses.

Claim.—The combination and arrangement of the entire machine for propelling machinery, cars on railroads, and other vehicles, as described in this specification, consisting of springs, cog wheels, ratchets, and levers.

No. 30,288.—JOHN A. BERRILL, of Waterville, N. Y.—*Improved Paint Mill*.—Patent dated October 9, 1860.—The object of this invention is to prevent the paint, as it is ground, from flying off from the runner or revolving grinding plate, as it is discharged from between said plate and the upper stationary one.

Claim.—Forming the periphery of the rotating grinding plate A, with a recess *a*, to provide a ledge *b*, as and for the purpose set forth.

No. 30,289.—PETER I. BIDERMAN, of Philadelphia, Pa.—*Improvement in Conveying City Railroad Cars over Obstructions*.—Patent dated October 9, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Raising and lowering the forward and rear trucks of the car, substantially in the manner specified, whereby the car wheels are elevated so as to pass over obstructions upon the track, as and for the purpose set forth.

No. 30,290.—WILLIAM OLAND BOURNE, of New York, N. Y.—*Improvement in Ore Separators*.—Patent dated October 9, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, a bed for separating ores or similar substances, composed of layers of fibrous or woven materials, secured by stitches or equivalent means for main-

taining a fixed and firm support to said bed, and preventing unevenness and bagging, as set forth.

Second. In combination with a bed, constructed as set forth, I claim the adjustable plate or rim *f*, for regulating the depth of the ore on the bed, as described.

No. 30,291.—WILLIAM BRETENSTEIN, of New York, N. Y.—*Improved Fire Escape*.—Patent dated October 9, 1860.—This invention consists in constructing a fire escape, in which the ladder of the required length is wound around a reel in such a manner that it may be elevated and made rigid, similar to the ladders usually employed for that purpose; and it also consists in constructing an escape box, and in so connecting the same with the ladder that it may slide up or down on one side of the ladder, having the other side of the ladder free for ascension or descension.

The inventor says: I *claim*, first, the construction of the ladder, consisting of several sections joined and hinged, substantially as described.

Second. The secure folding and unfolding of the ladder, by means of the windlass H, the reel or drum D, and the ropes H, substantially as specified.

Third. The manner of attaching the escape box N to the ladder, and of sliding it on the same, substantially as set forth.

Fourth. The manner of adjusting the carriage and frame A to any position required, by means of the division of the frame, and the insertion of lever screw and handle P P, substantially as specified.

Fifth. The general construction of the machine, in the manner and for the purpose substantially as described.

No. 30,292.—FREDERICK BRUBACH, of Lancaster, Pa.—*Improvement in Wooden Coffins*.—Patent dated October 9, 1860.—This invention consists in forming the top or lid of two united halves B, on the head and foot pieces D, framed together at the wide or shoulder points by a cross piece C; the raised edges A, meeting centrally, fastened down by the screws *b*, thus forming four open pannels, against the under side of which, plates of glass E are secured air tight.

Claim.—The combined framework of the coffin lid A B C D, and pins *d*, with the glass plates E inserted, the loose pannels G H, with their pins K, and lock button I, when made substantially as specified, for the purpose set forth.

No. 30,293.—ISAAC C. BRYANT, of Philadelphia, Pa.—*Improvement in Casting Embossed Type*.—Patent dated October 9, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination of the bottom and top letter, or letters, in a frame made of iron, brass, copper, or any other metal, suitable for the purpose.

Second. I claim the arrangement of the openings in the top letters, for putting in the steel, iron, or brass wire, forming the points or projections on the face of the type.

Third. I claim the combination of one or more guide letters at the top, with one or more letters at the bottom, formed so as to give the desired shape in points or projections to the letters or designs to be cast.

Fourth. I claim the combination of separate pieces of steel, iron, or brass wire, round, square, or any other shape suitable, in connection with frame and guide, and bottom letters, or designs.

Fifth. I claim the combination of points, so as to form a letter or letters, and solidifying them by casting type or other metal around them in a mould and double matrix, as described.

Sixth. I claim the mould, in connection with the matrix, slide, and pin, as described.

No. 30,294.—PARTICK BURKE, of Helena, N. Y.—*Improvement in Stabling Cows*.—Patent dated October 9, 1860.—This invention consists in making a raised bed or floor, upon which the cow lies, movable by placing the same upon rollers, and in perforating this movable floor for the purpose of allowing urine, &c., to pass through it, instead of depending upon the inclination of the floor to carry off the liquids.

Claim.—The arrangement of the perforated floor G, and the rollers E, with the tight floor D, and manger A, as and for the purposes set forth and described.

No. 30,295.—N. C. CARTER, of Union City, Ind.—*Improvement in Cultivators*.—Patent dated October 9, 1860.—This invention consists of a peculiar device for the purpose of regulating the distance between the cultivator teeth, for the purpose of enabling the same instrument, or implement, to be used successively on different crops where the distance between the drills is various.

Claim.—The arrangement of rods *c c*, rods *e e*, with the looped heads *e¹ e¹*, and terminal screw bolt *d¹*, in connection with rods *g* and *h*, and screw link *i*, all constructed and operated in the manner as and for the purpose set forth.

No. 30,296.—EZEKIEL CASNER, of Penn Yan, N. Y.—*Improved Mill Bush*.—Patent dated October 9, 1860.—The inventor says: To use my implement secure the case within the eye of the bedstone in position, so that the top of the cover will be on the plane of the top of the bedstone with the centres of each at the same point. The spindle being in place, put the bush blocks in their place, and secure them by the bottom and the bolts, lubricate the blocks and spindle, and then place some textile or fibrous substance, saturated with oil, about the spindle upon the blocks. When the cover is put on, the bush and spindle are ready for operation. The bush blocks may be loosened or tightened by the screws F F, and the same may be done while the spindle is in operation.

Claim.—The combination of the case A, bush blocks E E E E, bottom plate C, and bolts F F, when made and used substantially as specified.

No. 30,297.—ROBERT CATHCART, of Baltimore, Md.—*Improved Light for Cars*.—Patent dated October 9, 1860.—This improvement consists in the relative position assigned to the signal lamp upon the car, and the means of illumination employed in the interior thereof, so that whilst all the rays of light which pass to the inner part of the carriage have their full effect, those which are directed upward are economized and striking on the conical reflector are dispersed in the space outside.

Claim.—The arrangement in the manner specified of the conical reflector and lantern, relatively to the lamp and roof of railway and other cars, for the purpose described.

No. 39,298.—LEWIS S. CHICHESTER, of New York, N. Y.—*Improved Mill for Grinding Coffee*.—Patent dated October 9, 1860.—This invention consists of an oscillating grooved cylinder, combined with adjustable cheek pieces that are grooved on their inner faces with inclined furrows, and the cutting edges on the grooves on the cylinder standing in the reverse direction to those on the cheek pieces, and at an angle to the same, produces a shearing cut that is specially adapted to cutting, or cracking up grains of coffee into fine particles without the compressing and rubbing operation so usual in mills.

Claim.—The adjustable cheek piece *c c*, formed with converging grooves, in combination with the oscillating or vibrating cylinder *b*, as and for the purpose specified.

No. 30,299.—D. W. CLARK, of Stratford, Conn.—*Improvement in Stirrups*.—Patent dated October 9, 1860.—This invention is to render the sides of the stirrups adjustable in respect to their distance apart, so that any stirrup may be adjusted to suit the size of the boot or shoe of the rider, and so that the foot of the rider will also, when desired, be prevented from passing too far through the stirrup, thereby preventing liability to accident in case of the rider's fall from the saddle.

Claim.—I claim the making of the side pieces of stirrups adjustable in the manner and for purposes substantially as shown and described.

I also claim the spring G, between the side pieces, when arranged and operating as set forth.

No. 30,300.—T. COTRELL CLARKE, of Camden, N. J.—*Improved Filter*.—Patent dated October 9, 1860.—This invention consists of a self-cleaning filter, that allows the sediment to pass off from the filter, each time the water is drawn, or whenever desired, so that the filtering medium is cleansed, without reversing, and an accumulation of sediment prevented.

The inventor says: I claim, first, in a filter for water, an opening or escape on the supply side of the filtering medium, controlled in the manner set forth and for the purposes specified.

Second. I claim the slide *l*, in combination with the valve *h*, for opening said valve to clean the filter or draw unfiltered water, as specified.

Third. I claim the construction of the divided case *c d*, kept together by the turn buttons *e e*, and provided with the ribs *l l*, forming the water channels, in the manner and for the purposes specified.

No. 30,301.—C. P. CROSSMAN and J. B. BROWN, of Warren, Mass.—*Improvement in Stove Radiators*.—Patent dated October 9, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A heat radiating attachment for stoves, which is composed of an outer case A, flanged opening C, inner conical chamber B, filling B¹, top plate *a*, cold air pipe D, smoke pipe E, oven above the chamber B, with openings *b F*; the whole being constructed as set forth and described, so as to be capable of application to the top plates of common cooking and other stoves, all as set forth.

No. 30,302.—CYRUS DEBOLT, of Ottawa, Ill.—*Improvement in Cultivators*.—Patent dated October 9, 1860.—This invention consists in providing the means by which, in a corn plough or cultivator, part of the shovels or ploughs of which may cultivate one side of a row of grain, and the other part, of the other side, to vary the line of the furrow of the two inner

ploughs, and thereby to avoid the danger that would exist if no such means were provided, of cutting up, or otherwise injuring the hills of the row of corn, or other product over which the cultivator should pass.

Claim.—The arrangement of the handles C C, the joints K K, the brackets F, and the up-rights D D, for the purpose set forth and as described.

No. 30,303.—CHARLES DOOLITTLE, of Oswego, and ALFRED CARSON, of New York, N. Y.—*Improved Fruit Case.*—Patent dated October 9, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The construction of the fruit case with a receptacle B, springs C, and an ice chamber f, the whole arranged and operating as and for the purposes set forth and described.

No. 30,304.—A. M. DYE, of Clinton, Ill.—*Improved Folding Bedstead.*—Patent dated October 9, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Constructing the bed post in two sections D and F, when made to be conjoined by the ring C, or its equivalent, and secured in an upright position for use by the screw bolts c c, and thumb nuts g g¹, and when made to fold or turn upon said screw bolts c c, for the purpose of making the whole bedstead compact and portable, substantially as described.

No. 30,305.—LEWIS EVANS, of Morgantown, Va.—*Improvement in Breech Loading Ordinance.*—Patent dated October 9, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, locking the breech piece F, in the breech end of the barrel A, by means of a hinged lock bar J, passing through a slot in the breech piece, and corresponding slots in the breech end of the barrel, as and for the purposes described.

Second. Operating the hammer F¹, by means of a hinged dog E, and the crank shaft B, as and for the purposes described.

Third. Adjusting the breech piece in line with the barrel, by means of toothed brackets L, moving in vertical ways, as and for the purposes described.

Fourth. The combination of the breech piece F, with a sliding standard R, spring catch O, pin A, incline T, and rack W V, for the purposes described.

No. 30,306.—JOHN ERICSSON, of New York, N. Y.—*Improvement in Air Engines.*—Patent dated October 9, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination of the equilibrium cylinders a b, the equilibrium pistons f g, and the working piston o, when used substantially in the manner and for the purposes set forth.

Second. The combination of the equilibrium cylinders a b, the equilibrium pistons f g, the valves 5 and 6, the vessel k, and the tubes therein contained, when used substantially in the manner and for the purposes set forth.

Third. The combination of the equilibrium cylinders a b, the equilibrium pistons f g, the valves 3 and 4, and the heat deposit vessel h, when used substantially in the manner and for the purposes set forth.

Fourth. The combination of the equilibrium cylinders a b, the equilibrium pistons f g, the valves 5 and 6, and the heater i, when used in the manner and for the purposes set forth.

Fifth. The combination of the equilibrium cylinders a b, the equilibrium pistons f g, the valves 1 and 2, and the cooler n, when used in the manner and for the purposes set forth.

Sixth. The combination of the equilibrium cylinders a, the equilibrium piston f, the valve 5, and the bent pipe h¹ h¹ h¹, when used for the purposes set forth.

No. 30,307.—LEONARD Y. GARDINER, of Amsterdam, N. Y.—*Improvement in Window Sash Supporters.*—Patent dated October 9, 1860.—This invention consists in the employment of the India rubber ball or roller a, to hold the sash in place, said ball or roller travelling in grooves or guides b, formed in the sash or frame, or both.

Claim.—The India rubber (travelling) ball or roller a, and the groove or guide b, when constructed and arranged substantially as set forth.

No. 30,308.—WILLIAM M. GAREE, of Cox, Ohio.—*Improvement in Seeding Machines.*—Patent dated October 9, 1860.—This invention relates to that class of machines which are operated manually, and carried in the hands of the operator.

Claim.—The arrangement of the spring B, jaws D E, and board C, with the slide F, box A, guard plate j, and brush h, all as set forth and described, for the purposes set forth.

No. 30,309.—A. J. GIBSON, of Worcester, Mass.—*Improvement in Revolving Fire Arms.*—Patent dated October 9, 1860.—This invention consists in the employment, in combination with a cylinder, having its chambers opening into its rear face, of a recoil shield, made sepa-

rate from the frame of the arm, and movable transversely thereto, in such a manner as to expose the rear openings of the chambers to permit the insertion of cartridges thereat.

Claim.—The transversely movable recoil plate D, applied in combination with the chambered cylinder, substantially as and for the purpose specified.

No. 30,310.—WASHINGTON L. GILROY, of Philadelphia, Penn.—*Improved Paint Can.*—Patent dated October 9, 1860.—This invention consists in the manner of constructing the upper or chine end of the paint vessel, provided with a drop handle or bale for applying and securing thereto the head or cover.

Claim.—Constructing the upper end of the body of the vessel A, with the wired boundary edge or rim *d*, and the inner bead *f*¹, substantially in the manner and for the purpose set forth and described.

No. 30,311.—C. GLOYD, of Wynant, Ohio.—*Improved Frame for Bill of Fare.*—Patent dated October 9, 1860.—This invention consists in the arrangement of two arms, supported by three or more legs, and provided with suitable slots or recesses to receive the frame in which the bills of fare are adjusted, in such a manner that when adjusted in frames and placed in the arms, they are visible to persons sitting around the table, and can be examined by different persons from different sides of the table at the same time.

Claim.—The arrangement of the arms A, supported by legs B, and provided with recesses *b*, in combination with the frames D, constructed and operating substantially in the manner and for the purpose set forth.

No. 30,312.—G. W. GRADER and A. C. WURZBACH, of Memphis, Tenn.—*Improved Steam Gauge.*—Patent dated October 9, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The employment of an air chamber, connected with the water space of the boiler, and interposed between it and the indicating gauge, substantially as and for the purpose shown and described.

No. 30,313.—JAMES T. HAM, of Senatobia, Miss.—*Improvement in Cotton Seed Planters.*—Patent dated October 9, 1860.—This invention consists in the employment of a bi-conical roller or seed hopper, placed within a suitable frame, which is provided with an adjustable furrow opener, covering device, and cleaver.

The inventor says: I *claim* the combination of the bi-conical roller or hopper C, with the adjustable rod G, arranged for joint operation, as and for the purpose set forth.

I further claim, in connection with the roller or hopper C and rod G, the adjustable arm E, provided with the furrow openers F C, and the adjustable bar H, all being arranged substantially as and for the purposes set forth.

No. 30,314.—LUDWIG H. HASSE, of New York, N. Y.—*Improvement in Sub-Marine Lamps.*—Patent dated October 9, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the construction and arrangement of the sub-marine lamp, substantially as described, with a double bottom of the casing, containing caustic potash, and with an exhaust pipe, for the purpose of easily removing the products of combustion.

And I also claim the sub-marine lamp, substantially as specified, in combination with the tubes O and P, and with the piston Q, working on a detonating compound for the purpose of igniting the same, substantially as set forth.

No. 30,315.—ANDREW A. HENDERSON, of Portsmouth, N. H.—*Improvement in Caloric Engines.*—Patent dated October 9, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement of the flame space *a*^{*}, between the cylinder A and G, substantially as and for the purpose set forth.

Second. The arrangement of the eccentric frame P, and reversible eccentric N, in combination with the supply piston J, constructed and operating substantially as and for the purpose specified.

Third. The combination of the regenerator J^s, with the supply piston J, constructed and operating substantially as and for the purpose described.

Fourth. The arrangement of the reversible eccentric X, in combination with the spring rod *d*, and the exhaust valve *b*, constructed and operating in the manner and for the purpose set forth.

No. 30,316.—DANIEL HERR, JOHN HERR, and JOSEPH F. HERR, of Lancaster, Penn.—

Improvement in Corn Planters.—Patent dated October 9, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination and arrangement of the cogged cam M, slotted sliding ledge D, connecting blocks C C², sliding valves A, with their openings 3 3 and pegs 2, together with the hopper and shovel support E, on the pivotted side pieces F and cam support L, simultaneously operated by the lever Z, substantially as set forth and specified.

No. 30,317.—JOSEPH HILL, of Brooklyn, N. Y.—*Improvement in Galvanic Plates for Medical Use.*—Patent dated October 9, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The galvanic foot plate or battery, formed of the sections *a b c d*, hinged or jointed together in the manner and for the purposes specified.

No. 30,318.—JAMES HOBBS, of Columbus, Ind.—*Improved Fire Escape.*—Patent dated October 9, 1860.—The speed of the descent may be checked at pleasure, either by the person descending or persons attending the operation from the ground, by exerting a more or less powerful strain on the end of the rope A, which is suspended from the friction plates B B¹.

Claim.—The arrangement of the clamping plates B B¹, with the screw C, crank *c*, and spring *b*, as shown and described, for the purpose set forth.

No. 30,319.—REUBEN W. HOYT, of Boston, Mass.—*Improvement in Apparatus for Burning Gas.*—Patent dated October 9, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, carrying off the unconsumed products of combustion of the flame or jet by forming within the apparatus itself ventilating flues, arranged and operating as described, the same consisting of the main stock *a a*, and branch pipe *c*, terminating in a bell shaped mouth extending over the flame or jet as set forth.

Second. So arranging and locating the gas supplying pipes, or the reservoir from which all the branch pipes for conveying gas to the burners receive their supply that they or it shall receive, and be exposed to the upward heated currents that proceed from the flames or jets, substantially as described, and for the purposes specified.

No. 30,320.—LEWIS HOLCOMB, of Granby, Conn.—*Improvement in the Method of Oiling Leather.*—Patent dated October 9, 1860.—The claim explains the nature of this invention.

Claim.—The method of treating leather described, which consists substantially in submitting the leather, after it has been tanned, finished, and covered with tallow, to the action of a hot smoothing iron, all as set forth.

No. 30,321.—GILBERT HUBBARD, of Montville, Mass.—*Improvement in Measuring Faucets.*—Patent dated October 9, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the piston and piston rod D¹, inlet and discharge valve orifices, with their valves *a c¹ c¹*, arranged as described, in combination with the rods C and C¹, wheel H, and pawls G I, operated alternately by the rising and falling of the piston, the whole being arranged relatively with each other and operating substantially in the manner set forth.

I further claim the wheel M, with its notches and teeth *i i*, and stop pin *j*, in combination with the index registering hand L, spring *k*, wheel *h*, pinion and shaft *g*, and ratchet wheel H, arranged substantially in the manner and for the purposes set forth.

No. 30,322.—CHARLES HUGHES, of New Orleans, La.—*Improved Machine for Straightening Bale Hoops, &c.*—Patent dated October 9, 1860.—In operating this machine the two pairs of rollers B C are rotated in the direction indicated by the arrows, power being applied to a pulley J attached to the axis of the upper roller B; the trough I is supplied with paint of any suitable kind, and as the rollers rotate, the hoops are passed between the rollers B C, the former straightening them and the latter covering them with paint.

Claim.—The arrangement of the rollers B B C C and platforms F F, with the paint trough I and drip box G, as and for the purposes shown and described.

No. 30,323.—KELLOGG T. HURLBURT and HOWARD THOMPSON, of Port Byron, N. Y.—*Improvement in Operating Gates of Canal Locks.*—Patent dated October 9, 1860.—The claim and engravings explain the nature of this invention.

Claim.—In combination with a vertically rising and falling lock gate, a moving frame for receiving and carrying said gate around out of the way of passing boats or craft, substantially as described.

No. 30,324.—GEORGE C. JENKS, of New York, N. Y.—*Improvement in Letter Boxes.*—

Patent dated October 9, 1860.—The claim and engravings explain the nature of this invention.

Claim.—So notching or otherwise forming the edge of the ledge or ledges placed in the channel to the receptacle that the withdrawal of a letter shall be thereby prevented, substantially as described.

No. 30,325.—AMOS JONES, of Lebanon, N. H.—*Improvement in Roof Brackets.*—Patent dated October 9, 1860.—This invention is a new and improved bracket for pitched roofs, to be used thereon for roofing, slating, or for any kind of work where men are required to remain on roofs any length of time.

Claim.—The employment of the adjustable clamping plates *a a* and screws *b b c*, in combination with the strips A, hinged resting bar B, rack plate C, and hinged prop D, all in the manner and for the purpose shown and described.

No. 30,326.—JOHN JOHNSON, of Biddeford, Me.—*Improvement in Steam Generators.*—Patent dated October 9, 1860.—The operation of the pumps requires to be regulated so that the casing A is not overflowed and that the tubes are supplied from the said casing no faster than the steam is generated and used; the lower tubes B B are heated by radiation from the incandescent fuel on the grate, and all of the said tubes are heated by the circulation between, among, and around them, of the flame and heated gaseous products of combustion, the lowest tubes being heated most intensely, and those above gradually less, according to their distance from the fire.

Claim.—The arrangement of the tubes B and valves *f* with each other and with the independent water heating case A, in the manner shown and described.

No. 30,327.—F. W. KROEBER, of Forbestown, Cal.—*Improved Gate and Door Swing.*—Patent dated October 9, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The application of the inclined plane, the wheel, the lever, and the spring, to the adjusting of gates and doors to any required position.

No. 30,328.—TRUCKSON S. LA FRANCE, of Elmira, N. Y.—*Improvement in Pistons for Steam Engines.*—Patent dated October 9, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination of the hollow piston rod A with the rod B, when the said rod B is provided with inclined planes which act upon radial studs, in the manner and for the purpose specified.

Second. Elevating or depressing the rod B by means of nuts acting upon the screw bolts *f* and *g*, when the latter are placed at the extremities of the cross bar K, in the manner and for the purpose set forth.

No. 30,329.—ANDREW J. LAIRD, of Middletown, Pa.—*Improved Arrangement for Operating the Valves of Steam Engines.*—Patent dated October 9, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The vibrating and sliding bar C, in combination with the rocker arm D, substantially as set forth, for operating the valve motion of steam engines.

No. 30,330.—SALEM T. LAMB, of New Washington, Ind.—*Improvement in Harvesting Machines.*—Patent dated October 9, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, in combination with the pulley and crank and the semi-clutches formed thereon, and the spring for holding them together, the several devices that enable the driver, from his seat, to unclutch them for the purpose stated, said devices being arranged substantially as described.

I also claim, in combination with an automatic rake, the making of the teeth three sided, and presenting one of the sides thereof to the grain, when said teeth are inclined on the rake head from its heel towards its point, for the purpose of allowing the rake to clear itself from the grain, substantially as described.

I also claim, in combination with a sweeping rake, such as is represented, the interposing of the springs *f* and *g* (the former travelling with the rake and the latter stationary on the platform) between the rake and the part or point upon which it drops, when said springs are so arranged as not to retard the movement of the rake by their recoil, and so that the raising or lowering of the rake shall not be injuriously affected by any sudden jarring of its parts, but have a free and easy movement, as described and represented.

I also claim, in combination with a travelling rake, the travelling support *f*, substantially as and for the purpose specified.

No. 30,331.—ANDREW F. LAPHAM, of New York, N. Y.—*Improved Washing Machine*.—Patent dated October 9, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The air-tight cylinder *d*, when constructed with transverse circular ribs *e*, as described, and arranged to revolve endwise together with the loose balls *f*, substantially as set forth.

No. 30,332.—JOHN PARKER LINDSAY, of New York, N. Y.—*Improvement in Locks for Fire Arms*.—Patent dated October 9, 1860.—This invention consists in the use of a detent which is operated by one of the hammers, so as to arrest the trigger and prevent action on the second sere until the trigger has been released by the finger and thrown forward by the action of the detent, when the detent is vibrated by its proper spring, and then by again pulling on the trigger it will act on the second sere, to release the second hammer to ignite the next charge.

Claim.—The use of the detent, in combination with the hammer and trigger, when the whole is constructed, combined, and made to produce the required result, substantially as set forth.

No. 30,333.—DENNIS G. LITTLEFIELD, of Albany, N. Y.—*Improvement in Furnaces*.—Patent dated October 9, 1860; ante-dated July 3, 1860.—This improvement is a combination of a stove and furnace, and consists in the employment of a cold air channel or inlets at the base, a perforated space in the covering opposite the most intensely heated part of the stove, and a top fixture to the covering to control the passage of the heated air, a device that can be used as a parlor furnace, warming the room where placed by heated air combined with direct radiation, or, as a double heating furnace, warming the room where placed by direct radiation, and rooms above by heated air.

Claim.—The combination of the cold air channel *H*, the perforations *s s s s s s s s s s*, the register top to covering *L L L L*, and the damper *R*, the whole being constructed and arranged in the particular manner specified.

No. 30,334.—FREDERICK H. MANNY, of Rockford, Ill.—*Improvement in Winnowing Machines*.—Patent dated October 9, 1860.—This invention consists in the employment of certain devices and arrangements for effecting a thorough winnowing of grain, and the improvement consists in suspending the shoe by means of springs at the sides thereof in such manner that each end of the shoe shall vibrate freely with a transverse movement through openings left for the purpose in the sides of the frame of the machine, and arranging below this shoe an inclined screen suspended by radius bars, and having a longitudinal vibratory movement imparted to it, both sides and screen being driven by a peculiar arrangement of mechanism.

Claim.—The combination of the driving shaft *C*, pitman rod *c*¹, parallel bar *H*, connecting rods *h h*¹, and bell cranks *h*², with the removable nest of sieves *F*¹, and screen *G*, when the whole are constructed, arranged, and operated in the manner described, for the purpose set forth.

No. 30,335.—THOMAS J. MAYALL, of Roxbury, Mass.—*Improvement in Breech Loading Ordnance*.—Patent dated October 9, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, "thumbing" the touch holes of the chamber automatically by means of the plate *o*¹, operating as described, or any other equivalent arrangement of mechanical devices for accomplishing the desired result.

Second. Preventing the accidental non-discharge of any one chamber from disorganizing the apparatus by means of devices, operating as described, to throw the rammer out of gear and preventing its inserting another cartridge, and then throwing it into gear again to be in readiness to perform its functions for the next succeeding chamber.

Third. In combination with the rotating magazine, the needle rod *N*¹, operated automatically as described, and connected with a galvanic battery, so as to ignite the charges at the proper times, as set forth.

Fourth. The arrangement of the gears *N O* and *P*, and their swinging arms, operating together as described, so as to permit the gun carriage to travel back and forth without disconnecting the devices which communicate motion to the machinery from the driving shaft.

Fifth. The sponging or "swabbing" of the chambers of the magazine by means of the devices operating as described, the same consisting of the rod *D*¹, carrying a suitable sponge jointed to a right angular lever, actuated by a suitable cam, as set forth.

No. 30,336.—CHARLES MCCARTHY, of New York, N. Y.—*Improved Safety Apparatus for Steam Boilers*.—Patent dated October 9, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement and combination of the pipe *E* with a safety valve, in such a

manner that, by any excess of pressure in the boiler, the water from the lower part of the boiler shall be forced up said pipe E to open said valve and pass upon the fire, or made to give an alarm, the whole being constructed substantially as set forth.

No. 30,337.—JAMES McMAHAN, of Amelia, Ohio.—*Improvement in Window Sash Supporters*.—Patent dated October 9, 1860.—This invention relates to the employment of strips of an elastic substance placed in the grooves of window frames in which the top and bottom parts of the sash slide, and the use of small rollers let into the edges of the sash, but projecting therefrom sufficiently to press against and insert themselves into the elastic lining strips.

Claim.—The elastic lining strips *a a* and the rollers *d d*, when employed in a window frame and sash, substantially as and for the purposes described.

No. 30,338.—GEORGE R. MENEELY, of West Troy, N. Y.—*Improvement in Hanging Bells*.—Patent dated October 9, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, in uniting the bell to the rocking or revolving yoke, the employment of the flanged and slotted, round, tapering neck F cast on the bell, the round tapering hole G made in the yoke, the movable perforated cap H, and the series of screw belts K; all constructed and arranged in combination substantially as described.

Second. I also claim securing the supporting bolt C of the clapper to the yoke D by means of a key Q, formed and applied to the clapper bolt and to the yoke, and arranged with the parts by which the bell is united to the yoke, as described, so that the clapper will be thereby prevented from being turned in the yoke with the bell when the parts by which the bell is secured to the yoke are turned in the yoke with the bell about the clapper bolt.

No. 30,339.—TITUS MOLINIER, of New Orleans, La.—*Improvement in Apparatus for Skimming*.—Patent dated October 9, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The described crank skimming machine, consisting in three essential parts—a frame A, a pushing and drawing screw B, and a movable basin C, at the end of the box D, sliding in frame A, said box D having in its interior a system of paddles, by which machine the cane juice contained in the last kettle of a set of sugar kettles may be skimmed clean in any easy, prompt, and efficacious manner.

No. 30,340.—CHARLES NEWCOMB, of New York, N. Y.—*Improvement in Apparatus for the Ventilation of Railroad Cars*.—Patent dated October 9, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination, with the main pipes running along the train of cars, as described, of perforated pipes within the body of the cars and below the ceiling, together with their dampers, the whole being arranged to be operated as described, so that each car may be supplied with the requisite quantity of fresh air free from dust, smoke, or cinders, and without such ventilation of one car interfering with that of the other.

No. 30,341.—JOHN W. PALMER, of Port Republic, and JOHN K. LEEDY, of Tom's Brook, Va.—Patent dated October 9, 1860.—*Improvement in Bee Hives*.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim*, first, the combination of the partitions B B, and the slides C C, each being provided with openings which correspond, the partitions being provided with dovetail grooves upon one side for receiving the slides, two being placed back to back with the slides together, substantially as and for the purpose specified.

Second. The funnel-shaped box E, the pipe F, and the bag C, when the same are arranged in the manner and used for the purpose of making a bee feeder, substantially as set forth.

No. 30,342.—J. Y. PARCE, of Fairport, N. Y.—*Improved Packing Press*.—Patent dated October 9, 1860.—This invention has for its object the packing of articles of manufacture in a pulverized or finely reduced state, in papers of uniform size and appearance, and facilitating the process over the methods heretofore employed.

The inventor says: I *claim* the combination and arrangement of the foot lever B, stirrup rods *b b*, jointed elbow lever *d*, and pawl *g*, operating conjointly, substantially as set forth and described.

I also claim the folder plate *m*, attached to the packing box K, substantially as and for the purposes set forth.

No. 30,343.—EDMUND PAGE, of New York, N. Y., assignor to himself and CORNELIUS H. DELAMATER, of said New York.—*Improved Forge Hammer*.—Patent dated October 9, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* an elastic or yielding connecting rod, constructed as described, or in some equivalent manner.

I claim an elastic or yielding connecting rod, or its substantial equivalent, in combination with the vibrating arm or lever that operates it to work the hammer.

I claim connecting the connecting rod to the arm or lever that operates it by means of a slide, arranged to traverse on said arm, so as to vary the length of the stroke and the force of the blows struck by the hammer while in operation, and without stopping it.

I claim the crank which operates the hammer, in combination with an elastic or yielding connecting rod.

I claim balancing the helve and hammer by springs arranged on one or both sides of the fulcrum.

No. 30,344.—JACOB MARSH PERKINS, of Chicago, Illinois.—*Improved Picnic or Excursion Seat*.—Patent dated October 9, 1860.—The object of this invention is to provide a strong, light, and reliable seat, which can be conveniently carried, and which will occupy but a small space whenever it may be expedient to pack or store it away.

Claim.—The portable picnic seat, constructed as set forth.

No. 30,345.—JOHN PETTINGELL, of Lowell, Mass.—*Improvement in Iron Chimney Tops*.—Patent dated October 9, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The construction of the chimney top with the inclined plate *a*, to direct the air upward, the rim *b*, to assist the draft, the rim *d*, to bind the brick work between it and the lower rim *c*, and the moulding *e*, to connect the said lower rim *c*, with the plate *a*; the said moulding being joined to the plate a little inside of the edge thereof, so as to leave a dripping edge; the whole being intended to be cast of metal in one piece, all as shown and described.

No. 30,346.—JOHN J. PIKE, of Chelsea, Mass.—*Improved Carriage Jack*.—Patent dated October 9, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* my improved carriage jack as constructed with the extra bearing lever *C*, combined and arranged with the lifting lever *B*, and the supporting frame *A*, substantially in the manner and so as to operate as described.

And I also claim the combination and arrangement of the two spring stopping levers *k l*, and the pin *P*, with the levers *B* and *C*, applied within the frame *A*, and with respect to one another as specified.

No. 30,347.—JOSEPH PINE, of New York, N. Y.—*Improved Apparatus for Heating Railroad Cars*.—Patent dated October 9, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the heaters *F F*, with the outside end platforms *B B*, plates *b b*, boxes *J*, and gratings *d*, as shown and described, whereby the driver and conductor, and others standing upon platforms outside of the car, will receive the benefit of the heaters as well as the passengers occupying the interior.

No. 30,348.—WILLIAM G. POLLOCK and J. W. SENER, of Fredericksburg, Va.—*Improvement in Seed Planters*.—Patent dated October 9, 1860.—This invention consists in the arrangement and combination, in a suitable frame, of the revolving seeding cylinder *C*, adjustable rake frame *F*, spring rake teeth *t*, and compound pressure roller *R*.

The inventors say: We *claim*, first, the vibrating, adjustable rake frame *E*, constructed and arranged and operating as described.

Second. In combination with a seed planter, fixing the central pressure roller to the shaft *S*, while the slide rollers are loose upon it, in the manner and for the purpose set forth.

Third. The combination and arrangement of the cylinder *C*, frame *F*, and pressure rollers *R R*¹, in the manner set forth and shown, when used in a seed planting machine.

No. 30,349.—DAVID S. QUIMBY, of Brooklyn, N. Y.—*Improved Fireplace Heater*.—Patent dated October 9, 1860.—The large space between the outer shell *I*, and the fire box *F*, is for the purpose of heating a large amount of air to a moderate degree, not so high as to injure its quality for warming purposes.

Claim.—The arrangement of the fireplace box *F*, perforated plates *A B C D*, with the flues *G G*¹, and flue *E*, arranged and operated as described.

No. 30,350.—C. L. REHN, of Philadelphia, Pa., assignor to J. LUCAS & Co., of said Philadelphia.—*Improved Fastener for Metallic Kegs*.—Patent dated October 9, 1860.—This invention consists of a plate having the projecting arms, one or both of which has a rounded

end, both having notches, and the whole being otherwise constructed for attachment to, and detachment from, certain staples on the edge of the keg.

Claim.—The fastener E, composed of the plate *f*, and its two arms *e* and *e*¹, when one or both of the said arms has a rounded end *x*, and each arm has a notch *y*, and when the whole is constructed as set forth for attachment and detachment from the staples D and D¹ on the edge of the keg, by the method and for the purpose described.

No. 30,351.—J. K. ROBINSON and J. M. CLARK, of Bell Air, Ohio.—*Improvement in Pistons for Steam Engines.*—Patent dated October 9, 1860.—This invention consists in constructing the bolts which hold the piston and follower together with valve seats in their small ends, so that they shall serve the double purpose of holding the plates together and of constituting an adjustable seat for the ball valve; also in providing a flange around both piston head and follower, in combination with a key across the piston head to support the packing ring.

The inventors say: We *claim*, first, the valve seat bolts constructed substantially in the manner and for the double purpose described.

Second. The combination of the key *b*¹, with the rims *b c*, on the piston head and follower, substantially in the manner and for the purpose described.

No. 30,352.—HENRY D. ROGERS, of Grafton, Ohio.—*Improvement in Securing Points to Ploughs.*—Patent dated October 9, 1860.—This invention consists in providing the forward portion of a plough with a steel or hardened point, the upper lip of said point extending back and above the forward portion of the plough, and the under portion of said point extending the entire length of the lower portion of the landside of said plough, and there secured by means of lips and set screw.

Claim.—The securing the points B by means of the shoe A, hook D, and set screw E; the whole being arranged in the manner and for the purpose as described.

No. 30,353.—JOHN RUEGG, of St. Louis, Mo.—*Improvement in Brush Machines.*—Patent dated October 9, 1860.—The frame of the machine is shown at A; it consists of iron shears, similar to the shears of a turning lathe. Upon the shears a sliding head B is mounted. In the lower side of this head a dovetail groove is made to fit over the V-slides which compose the upper part of the shears. To the under side of head B a pinion rack H is fixed into which the pinion S is made to mesh, so as to move the head to and fro upon the application of power to the shaft L upon which the said pinion is fixed.

The inventor says: I *claim* the combination of what I have above denominated the "adjusting head," with what I have above denominated the "cutting or trimming head," in the manner described; and I also claim making the said adjusting and trimming heads in the manner described for the purpose specified.

No. 30,354.—MICHAEL E. RUDASILL, of Shelby, N. C.—*Improvement in Pumps.*—Patent dated October 9, 1860.—This invention consists in constructing and arranging the several parts of the pump.

Claim.—The arrangement of the plate A, box C, and cylinders B B, with the pistons I I, springs F F, hollow shaft D, and cam cylinder E; the several parts being connected and made to operate substantially as and for the purpose specified.

No. 30,355.—C. J. SCHOEDER, of Astoria, N. Y.—*Improved Propeller.*—Patent dated October 9, 1860.—Motion is imparted to the frame D by means of a reciprocating rod F which connects with the sleeves G H, the sleeve G being pivotted to the end of said rod, and the sleeve H being attached to it by means of the lever joint *g*. The sleeve H connects by means of a series of stay rods *h* with the bars *c*.

Claim.—The arrangement of the rod H, lever *g*, rods *h*, and braces *i*, with the two sleeves G H, bars *c d*, and sheet E, as and for the purposes shown and described.

No. 30,356.—ROBERT SCOTT, JR., of Madison, Ind.—*Improved Cotton Press.*—Patent dated October 9, 1860.—This invention consists in constructing and arranging the different parts of the press.

Claim.—The arrangement of the lever B, arm K, connecting piece J, and head D, with the cords G H, lever C, head E, lever *e*, connecting piece F, and cords I and L; the whole being constructed and operating in the manner and for the purpose specified.

No. 30,357.—MATHEW G. SLEMMONS, of Cadiz, Ohio.—*Improvement in Ploughs.*—Patent dated October 9, 1860.—This invention consists in the arrangement of the several parts of the machine.

Claim.—The arrangement of the two curved shoulder beams A A *a*, clevis B, transverse

bar D m, slotted, adjustable, forked handles E E b, and notched and mortised shovels C C e, in the manner and for the purpose described.

No. 30,358.—C. SNYDER and S. M. SMITH, of Hawley, Pa.—*Improved Portable Crane*.—Patent dated October 9, 1860.—This invention consists in combining, with an extension mast and adjustable crane arm, an extension brace for supporting the arm at any elevation to which it is capable of being placed.

Claim.—The combination, with the extension mast and adjustable crane arm E, of the extension braces, when the same are constructed and operate substantially as and for the purposes set forth.

No. 30,359.—HENRY SNYDER, of Dayton, Ohio.—*Improvement in Machines for Pulling and Cutting Stalks*.—Patent dated October 9, 1860.—This invention consists in the employment or use of two rotating wheels placed on a mounted frame and obliquely to its line of draught, said wheels being provided with hooks or cutters, rotated from the ground wheels of the machine, and used in connection with rotary cleavers.

Claim.—The employment or use of the wheels J J having an oblique position with the wheels B B, and provided with hooks or cutters O, in combination with the bars or knockers P, or their equivalents, essentially as and for the purpose set forth.

No. 30,360.—HENRY STANLEY, of Troy, N. Y.—*Improved Propellers in their Application to Vessels*.—Patent dated October 9, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the employment of two propellers having conical hubs and blades, as described, at the bow or stern of a vessel, substantially as and for the purposes set forth.

I also claim, in combination with the cone-formed hub and spiral blades, as above set forth, the backward inclination of said blades at the bows and the forward inclination at the stern, of those blades, as and for the purposes described.

I also claim the combination of twin bow and stern propellers, as described, attached to the same boat, for the purposes set forth.

No. 30,361.—ACHILLES ST. DIZIER, of Plaquemine, La.—*Improvement in Cane Harvesters*.—Patent dated October 9, 1860.—This invention consists in the employment of a rotating cutter in connection with a mould board and guide plates; all being attached to a suitable frame, and arranged in such a manner as to constitute a simple and economical machine for the desired purpose.

Claim.—The combination of the rotating cutter wheel G, mould board H, and guides or plates d f, the latter being attached to the runners E I, and all arranged as and for the purpose set forth.

No. 30,362.—ISAAC STODDARD, of Great Bend, Pa.—*Improvement in Propelling Machinery by Horse Power*.—Patent dated October 9, 1860.—This invention consists in applying conical friction rollers to the underside of the ordinary inclined rotating tread wheel.

Claim.—The arrangement of rollers R R, wheel W, standards s s s, block B, cranks c c, band wheels D D, pinions G G, and segments o o, the whole combined and operating substantially as set forth.

No. 30,363.—S. D. STOUT, of Charleston, Tenn.—*Improvement in Pumps*.—Patent dated October 9, 1860.—This improvement consists in the employment of compressed air in a novel manner, for forcing water up through a pipe from the bottom of a well or other low level in a continuous stream.

Claim.—The three-chambered box A, with its valves b b and d, and leader pipe B, in combination with the air pipes C C, cut-off box E, and bellows G, or its equivalent; the whole being arranged substantially as and for the purpose described.

No. 30,364.—JAMES B. SUITT, of Indianapolis, Ind.—*Improved Device for Operating Tilling Tables in Shingle Machines*.—Patent dated October 9, 1860.—This invention consists in the construction and arrangement of the different parts of the machine.

Claim.—The folding lever spring K, with shoe J, and weight L, with weighted table F, when operated in connection with the wheel B, cam C, connecting arm P, or their equivalents, as and for the purposes set forth.

No. 30,365.—GEORGE W. VAN DEREN, of Big Flatts, N. Y.—*Improved Valve for Steam Engines*.—Patent dated October 9, 1860.—The object of this invention is to construct an oscillating steam valve, in which the pressure of the steam has little or no effect to increase

the friction of the valve, so that the same works with equal facility when under pressure, as it does before the steam is let on

Claim.—The construction of the valve with a shoulder *a* at its extremity, and with a projection *B*, extending beyond its periphery, and otherwise made as shown and described, for the purposes set forth

No. 30,366.—M. W. WARNE, of St. Louis, Mo.—*Improvement in Filters.*—Patent dated October 9, 1860.—This invention consists in arranging the parts of a filter in such a manner that the water will pass through a proper filtering medium and cause the impurities to settle at the bottom; the filtering medium being placed within suitable boxes or receivers in a cooler, and raised in connection with iron and sulphur, so that the water, while being purified and cooled, will also be medicated.

Claim.—The employment or use of a cylinder *C D E*, one or more, placed within a water cooler *A*, and provided with a suitable filtering medium *F*, and iron and sulphur *H G*, essentially as and for the purpose set forth.

No. 30,367.—J. L. WELLS, of St. Louis, Mo.—*Improvement in Composition for Tanning.*—Patent dated October 9, 1860.—This compound consists of the following ingredients used in the proportion specified: catechu, one hundred pounds; soft water, one hundred and twenty-eight gallons; native sumac, one hundred and fifty pounds.

Claim.—The compound composed of the constituents specified.

No. 30,368.—GEORGE WHEELER, of New York, N. Y.—*Improved Keyhole Guard.*—Patent dated October 9, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The guard *D*, constructed so as to be attached to an ordinary key, and operate substantially in the manner and for the purpose set forth.

No. 30,369.—JOHN R. WILLIAMSON, of Washington, D. C.—*Improvement in Stirrups.*—Patent dated October 9, 1860.—This invention consists in making stirrups with the step movable on pivots, so that it can vary at any angle, or turn over and change sides in the bow, the rods or support for the foot being friction rollers, as also the sides of the bow as high as is necessary for the sides of the foot to bear against, thereby making it an anti-friction stirrup.

Claim.—The rotating and oscillating step, having friction rollers, or their equivalents, on both the step and sides of the bow, constructed and arranged in the manner and for the purposes specified.

No. 30,370.—ISAAC WISWELL, of Springfield, Vt.—*Improvement in Combined Window Net and Sash.*—Patent dated October 9, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the arrangement of the nettings and rollers *D D*¹, with the sashes *B B*¹, in the manner shown and described, so that when either of the sashes is opened, the netting will follow the sash and protect the space, and when either sash is closed, the netting appended thereto will be rolled up, all as set forth.

No. 30,371.—SAMUEL WISWALL, of Hyde Park, Vt.—*Improved Extension Wash Bench.*—Patent dated October 9, 1860.—This invention consists in the combination of two extension shelves and an elevated frame with the ordinary wash bench.

Claim.—The combination of two extension shelves *B* and *C*, and an elevated frame or posts *A*, with the ordinary wash bench; all the parts being constructed and arranged as and for the purposes set forth.

No. 30,372.—CORBIN O. WOOD, of Worcester, Mass.—*Improvement in Breech-loading Fire Arms.*—Patent dated October 9, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, limiting the amount of motion of the barrel by the catch or lever *G*, when constructed and operating substantially as described.

Second. I claim making the lever *G* serve the double purpose of withdrawing the cartridge and limiting the amount of motion of the barrel, as set forth and described.

No. 30,373.—RICHARD C. BARTON, of Troy, N. Y., assignor to E. D. BARTON and W. J. HARLAN, of Jersey City, N. J.—*Improvement in Steam Engines.*—Patent dated October 9, 1860.—This invention consists in connecting the piston rod and crank of an engine by means of a system of toggles, and connecting rods applied and arranged so that an engine possessing fine qualities for driving a screw propeller is obtained.

Claim.—The connection of the piston rod and crank of an engine by means of side rods J J and toggle rods K K L, applied and arranged in combination with the cylinder, piston rod and crank, substantially as specified.

No. 30,374.—CHARLES C. CROSBY, of Nantucket, Mass., assignor to himself and WILLIAM C. GARDNER, of the same place.—*Improved Machine for Punching Nail Holes.*—Patent dated October 9, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the described application or arrangement of a sheet carrier and discharger S, and a series of rollers H H H H¹ H¹ H¹, with respect to the movable carriage K, its supporting frame A, and edge punching and bearing wheels G E, applied to and operating with other punching and bearing wheels, substantially as explained.

And in combination with the carriage K and its discharging device S, I claim the inclined struts arranged on both ends of the frame A, in manner and so as to receive and guide a discharged and punched sheet of sheathing, as specified.

No. 30,375.—JOHN GRAY, of Melrose, N. Y., assignor to himself, J. R. WEED, and C. M. CLAY, of New York City, and J. W. DANFORD, of Brooklyn, N. Y.—*Improved Washing Machine.*—Patent dated October 9, 1860.—This invention consists of a revolving cylindrical drum, with slats set at an angle to the axis of said drum, so as to throw the water off by the centrifugal force at the same time that the inclined slats tend to elevate the water, this drum being combined with a conical tub, the inner surface of which is fitted with inclined ribs, standing in the same direction as those on the drum, but being stationary.

Claim.—The hollow vertical cylinder having open inclined slats and ribs *b*, to cleanse clothes or other materials by rinsing, in the manner specified.

No. 30,376.—E. T. GREEN, of Stoneham, Mass., assignor to himself and J. R. FOLSOM, of the same place.—*Improvement in Machines for Cutting Boot and Shoe Heels.*—Patent dated October 9, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the combination of a heel cutting mechanism, operating substantially as specified, with a mechanism for relatively adjusting, in the direction of the length of the shoe, the tread and seat formers, by which the rake or pitch of the rear of the heel may be varied without substitution of other formers.

Also, so arranging, in the heel shaping machines, which operate substantially as described, the forming and holding mechanisms, that each is distinct in itself, and removable one from the other, substantially in the manner and for the purpose set forth.

Also, the employment of the heel seat portion of the sole for a former of the heel and guide for the knife, either with or without the use of the tread former.

No. 30,377.—ALBERT KLEINSTEIBER, of Milwaukee, Wis., assignor to W. MUSGROVE, of New York, N. Y.—*Improvement in Lamps.*—Patent dated October 9, 1860.—The object of this invention is to obtain a lamp for burning lard, grease collected in cooking, &c.

Claim.—The tube E and piston F, the latter being adjusted by the screw C, or other device, in combination with a hollow wick formed of a straw G, or its equivalent, and twist H, essentially as and for the purpose set forth.

No. 30,378.—H. L. McNISH, of Lowell, Mass., assignor to himself and D. C. BUTLER, of the same place.—*Improved Barrel Head Machine.*—Patent dated October 9, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, giving the saw a vibrating movement in a direction longitudinally with its axis and simultaneously with its rotation, by means of the cam V, bars P S, and spring U, or their equivalents, for the purpose of cutting the heads in an oval or elliptical form, to compensate for the shrinking of the same, substantially as set forth.

Second. The arrangement of the slide Q, cam V, and screw R, substantially as shown, for the purpose of varying, in a slight degree, the diameter of the heads, as set forth.

Third. The arrangement of the plate Z and circular plate D¹, the former being attached to the latter by the bolt *g*¹ passing through the slot *r*, and the plate D¹ attached eccentrically to the bar S, as and for the purposes specified.

Fourth. Connecting the shaft K with the bar J, which is fitted loosely on the tubular upright *f*, and arranged substantially as shown, to admit of the turning and adjusting of shaft K, in a proper relative position with the saw shaft A, for the purpose of driving both said shafts from one and the same counter shaft.

No. 30,379.—FRANK S. SIBLEY, of Brooklyn, N. Y., assignor to himself and W. E. DOUBLEDAY, of the same place.—*Improved Method of Curling Hat Brims.*—Patent dated October 9, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The rope, strap, or band *c*, in combination with the dies *a* and *b*, for drawing upon and curling the material forming the hat brim, as specified.

No. 30,380.—SYLVENUS WALKER, of Boston, Mass., assignor to himself and S. S. HEMENWAY, of the same place.—*Improved Sash Fastener*.—Patent dated October 9, 1860.—This invention consists in the adaptation of one metallic plate, having a dovetailed mortise, to another plate consisting of a dovetailed tenon, and these are so arranged with regard to each other that when the tenon is slid into the mortise the sash is duly and firmly fastened.

Claim.—In combination with the cross bars of window sashes, the arrangement of plates A and B, when these are locked together by the hook of D, in the manner and for the purpose set forth.

No. 30,381.—JOSHUA E. AMBROSE, of Batavia, Ill.—*Improvement in Lamps*.—Patent dated October 16, 1860.—The claim and engravings explain the nature of the invention.

The inventor says: I *claim*, first, the arrangement of the heaters G H, with a space between them communicating directly with the external air, in connection with the collar *p* and plates *q q*, fitted on the top of the wick tube E and the perforated cap C, substantially as and for the purpose set forth.

Second. In combination with the parts aforesaid, the vapor tube F, placed within the cap C, and adjoining or contiguous to the wick tube, as and for the purpose specified.

Third. The shaft *e*, provided with the rod *f* and spurs *g*, which are within the chamber *d* of the wick tube, in connection with the plates *h j k* and spring *i* on said shaft, all being arranged to operate as and for the purpose set forth.

No. 30,382.—JAMES BAIN and SAMUEL C. BROWN, of Richmond, Ind.—*Improvement in Dovetailing Machines*.—Patent dated October 16, 1860.—This invention is more especially designed for cutting dovetails for window sashes, but it may be used for cutting dovetails for the manufacture of other articles.

The inventors say: We *claim*, first, the arrangement of the guides *v* and bearings *a*¹ of the cutter arbors J, substantially as shown, to admit of the adjustment of the cutters, for the purpose specified.

Second. The combination of the tilting or adjustable bed E, with the adjustable arbors J J, arranged for joint operation, as and for the purpose set forth.

No. 30,383.—JAMES BOYD and JAMES BELFORD, of Philadelphia, Pa.—*Improvement in Door Spring*.—Patent dated October 16, 1860.—This invention consists in the combination of two springs with a door, so hung as to be opened in either direction, the said springs being rendered adjustable on the door, connected with the door frame, and otherwise so arranged as to restore the door to its closed position after it has been opened, and so that either of the springs may be readily tightened; it also consists of a device for retaining the said springs and setting them at liberty at pleasure.

The inventors say: We *claim*, first, the combination of the two springs F F with the door B, when the said springs are arranged as set forth, and when they are adjustable on the door by the devices described, or their equivalents, for the purpose specified.

Second. We claim the plate G, with its hinged bar H and bolt I, when constructed and applied for the retention and release of the spring, as set forth.

No. 30,384.—JOHN A. BURNAP, of Albany, N. Y.—*Improved Regulator for Steam and other Engines*.—Patent dated October 16, 1860.—This invention consists of a stationary segment rack, provided with fine teeth on its upper surface, and secured to a suitable frame; a pendulous lever with a cross piece on its lower end, having two studs, one on each side, on which the pawls play freely, is suspended on a stud which slides in a guide secured to the frame, for the purpose of keeping it a proper distance to allow the pawls to work in the rack.

The inventor says: I *claim* the movable pendulous lever or ratchet arm C, working on a fixed rack B, said lever being constructed and operating substantially as and for the purpose specified.

Second. I claim the friction jointed arm P, for adjusting the relative position of the guard O, substantially as set forth.

No. 30,385.—GEORGE BUTTERFIELD and DANIEL BOWKER, of Boston, Mass.—*Improved Window Curtain*.—Patent dated October 16, 1860.—This invention consists in attaching to window curtains or blinds two elastic bands or cords, one on each side, and so that the curtain, on being released from its fastening at the bottom, will be carried up to the top of the window.

Claim.—The application to a window curtain of the elastic bands or cords E E, substantially in manner and to operate as above described.

No. 30,386.—CHARLES CARLISLE, of Woodstock, Vt.—*Improved Nail Hammer*.—Patent dated October 16, 1860.—This improvement consists in combining with a nail hammer a link-shaped angular lever *c*, of the proper proportions, by means of suitable fulcrum pins which pass through the opposite angles of said lever into the head of the hammer.

Claim.—Combining an angular lever with a nail hammer or hatchet, substantially in the manner and for the purpose set forth.

No. 30,387.—A. P. CASSEL, of Wataga, Ill.—*Improvement in Shrinking Tire*.—Patent dated October 16, 1860.—The object of this invention is to obtain a simple and portable device for upsetting or shrinking wheel tires, so that the latter may be made to fit the wheels, without cutting and rewelding, after being once formed.

Claim.—The arrangement of the adjustable bars F G and dogs H H with the curved bar A, jointed bars B B¹, slide D, spring E, and eccentric C, as and for the purposes shown and described.

No. 30,388.—ROWLAND CHAPMAN, of Darlington District, S. C.—*Improvement in Sowing Machines*.—Patent dated October 16, 1860.—This invention consists in the combination of devices for drilling, distributing, and covering guanoes and other fertilizers, and planting and covering cotton and other seeds.

Claim.—The arrangement of the frame A, the furrow opener B, the furrow smoother C, the uprights D D, the wheel E, and the spokes e e e e, operating in conjunction with the spokes i i i i, the spur L, cup G, and ring I, the whole being constructed for operation conjointly, in the manner and for the purpose set forth.

No. 30,389.—KENYON COX and THEODORE COX, of New York, N. Y.—*Improvement in Rotary Engines*.—Patent dated October 16, 1860.—This invention consists principally in a certain construction of the sliding piston and mode of applying the same, in connection with arc-formed revolving guide plates arranged between the heads of the inner and outer cylinder, whereby the pistons are caused to present themselves with their outer faces concentric with the inner periphery of the outer cylinder, and in proper contact with said periphery, throughout the whole of their revolution, and the escape of steam, water, or other fluid, between the pistons and the outer cylinder, and between the said cylinder and the rotating drum, is prevented, without any necessity for stuffing boxes around the shaft.

The inventors say: We claim, first, the jointed pistons G H G H and arc-formed guide plates F F, constructed, combined, and applied, in connection with the stationary cylinder A and rotating drum D, substantially as and for the purpose described.

Second. The ports a a, elongated in the manner and for the purpose described.

Third. The construction of the packing piece C, with bevelled projections fitted in the cylinder, substantially as and for the purpose specified.

No. 30,390.—BOSWELL CRANE and WILLIAM BALDWIN, of Anamosa, Iowa.—*Improvement in Tanning*.—Patent dated October 16, 1860.—The claim explains the nature of this invention.

Claim.—The process of tanning leather shown and described, consisting in the use of a compound of terra japonica and lye, in the proportions and manner specified.

No. 30,391.—SAMUEL F. DEXTER, of Paris, N. Y.—*Improvement in Boots and Shoes*.—Patent dated October 16, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The formation of an air chamber in or on the sole of a boot or shoe, substantially as set forth.

No. 30,392.—ANDREW DIETZ, of New York, N. Y.—*Improvement in Tanning*.—Patent dated October 16, 1860.—The distinguishing features of this invention consist in swelling the tissues of the skin previous to and during the process of tanning, by the use of saline liquors, so as to fit the skin to receive the tannic material, and in using, in connection with the substances employed to swell the tissues, tannic liquors of different and increasing strengths, whereby the centre and inner parts of the skin are tanned as quick, or nearly so, as the outer surfaces.

Claim.—Tanning leather by the use of saline solutions, as set forth, when used in combination with tannic liquors of different and increasing strengths, for the purposes as set forth.

No. 30,393.—ANDREW DIETZ, of New York, N. Y.—*Improvement in the Treatment of Tanned Leather*.—Patent dated October 16, 1860.—This invention consists in applying to leather, during the process of tanning, or after it has been tanned, a material or preparation which imparts suppleness, softness, and pliability.

Claim.—The use and application of honey in the tanning or treatment of leather during the last stages of the process of tanning, or in the finishing of leather, or after the leather is tanned and finished, as set forth.

No. 30,394.—SOLON DIKE, of Columbia, S. C.—*Improved Cotton Press*.—Patent dated October 16, 1860.—This invention consists in arranging and constructing the several parts of the press.

The inventor says: I *claim*, first, the employment of the guide rod H, operated and secured in the manner represented, for the purpose of directing the press block R and for keeping the levers F and D in proper position, substantially as specified.

Second. The trucks E E, secured between the bars L L and operating in connection with the levers F F and D D, frames G and C, guide rod H, and cords K and J, substantially as and for the purpose specified.

Third. In combination with the subject of the second claim, I claim the arrangement of the capstan M, operating substantially as specified.

No. 30,395.—N. T. EDSON, of New Orleans, La.—*Improvement in Metallic Hubs for Carriage Wheels*.—Patent dated October 16, 1860.—The claim and engravings explain the nature of this invention.

Claim.—So constructing the two metallic flanches C and B, which are provided with grooves A A A and projections, as represented, that they will clamp and hold the spokes separate and distinct from each other on their edges, while they are allowed to bear and press against each other on their faces, forming a wheel of dodged spokes, substantially as and for the purpose specified.

No. 30,396.—E. W. FERRIS, of Macon, Miss.—*Improvement in Astringent Medicines*.—Patent dated October 16, 1860.—Recipe No. 1, referred to in the claim, is as follows: Bark of wild cherry, pulverized, one and a half ounce; poplar bark, pulverized, one and a half ounce; refined loaf sugar, eight ounces; pure French brandy or alcohol, eight ounces; with an addition of pure water. Recipe No. 2, carbonate potasse, two ounces; compound spirits of lavender, one ounce; spirits of hartshorn, one ounce; essence of peppermint, one ounce; tincture of opium, one ounce; and sulphuric ether, one half ounce.

Claim.—The combination of recipes No. 1 and No. 2, substantially as stated.

No. 30,397.—ALFRED T. FINCH, of Meriden, Conn.—*Improvement in Window Blind Fasteners*.—Patent dated October 16, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Forming a blind fastener by casting the hooks solid with their axis pins and combining them together by clamping plates, as set forth.

No. 30,398.—JAMES R. FLOYD, of New York, N. Y.—*Improvement in Making Burglar Proof Safes*.—Patent dated October 16, 1860.—The claim explains the nature of this invention.

Claim.—The employment of the described franklinite, or other similarly constructed metal, in forming cast metal safes, substantially as and for the purposes set forth.

No. 30,399.—JOSEPH FOSTER, of Richmond, Va.—*Improvement in Gas Regulators*.—Patent dated October 16, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement of the load or weight on the inverted cup below the said cup and between the said cup and the valve, substantially as described.

Second. The arrangement of the guides of the inverted cup outside of or beyond the circumference of the said cup, substantially as and for the purpose set forth.

No. 30,400.—ELLIOTT P. GLEASON, of Providence, R. I.—*Improvement in Socket Couplings*.—Patent dated October 16, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* a socket coupling having a hollow cylindrical cushion of caoutchouc, or other similar elastic gum, adhering to the inner walls of the socket shell, and having the surface of the opening through the same moulded in a proper form by compression, and made elastic by the action of heat applied thereto, in the manner and for the purpose substantially as specified.

I also claim, in combination with such a cushion, a socket piece or nipple having a bulb or swelling ridge upon the end which passes through the opening in said cushion, by the contraction of which opening the nipple is held securely within the socket, as set forth.

No. 30,401.—RICHARD WRIGHT, of London, England.—*Improvement in the Evaporation of Cane Juices*.—Patent dated October 16, 1860; patented in England September 6, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of rotating disks with a vessel *a* and vessel *b*, so arranged that the water in the vessel *b*, cannot rise above the vessel *a*, or the water in the vessel *b*, be raised to a higher heat than boiling water, (212° Fahrenheit,) substantially as described.

No. 30,402.—EZEKIEL GULE, of Waverly, Mo.—*Improvement in Hemp Brakes*.—Patent dated October 16, 1860.—This invention consists in arranging four slatted cylinders in such

a relation to each other, and to two crushing feed rollers and a brake bar, so that the stalks of hemp will be acted upon on both sides simultaneously, after they are crushed and broken in the operation of separating the shoves from the fibres.

Claim.—The combination and relative arrangement of the feed and crushing rollers B B¹, the upper roller B¹ being transversely fluted, and brake bar D, with the beating cylinder E, and cleaning and beating drums G H J, all arranged and operating in the manner and for the purposes described and represented.

No. 30,403.—GEORGE W. HATHAWAY, of Tioga, Penn.—*Improvement in Corn Shellers.*—Patent dated October 16, 1860.—This invention consists in the arrangement of two endless revolving screws, in combination with a rotary disk having teeth on its under surface, and attached to a vertical axle which rises and falls by the action of the screws; the ears are fed under and exposed to the action of the rotary disk, which accommodates itself to the varying diameters of the ears, thereby shelling the same from end to end.

Claim.—The arrangement of two endless revolving screws A A, in combination with the rotary toothed disk K, constructed and operating substantially as and for the purpose specified.

No. 30,404.—DAVID B. HEDDEN, of Newark, N. J.—*Improvement in Wood Bending Machines.*—Patent dated October 16, 1860.—The claim and engravings explain the nature of this invention.

Claim.—My mode of applying the end pressure, by means of an adjustable weight, as superior to all other modes, being a self-acting, perfectly graduating, and equalized pressure.

No. 30,405.—R. HUMPHREY, of Unionville, Conn.—*Improvement in Punches.*—Patent dated October 16, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Constructing the punch and die plate in the manner substantially as shown, to wit: the punch A, having an interior cavity with rounded edges to form a cutting edge, and a solid punch B, projecting from the upper part of the cavity, and the die plate D, having a central hollow mandrel G, rising through its centre, so that when the sheet metal is placed between the die plate and punch A, the latter, on descending, will first cut out the blank, then bend the same into the form of a ferule, and then punch an opening in the upper end thereof, thus completing the ferule, all at one operation or motion of the punch A, as set forth.

No. 30,406.—J. J. HUTCHISON and J. D. BRANDBERY, of Cape Girardeau, Mo.—*Improvement in Brick Moulding Machines.*—Patent dated October 16, 1860.—This machine is intended to mould twelve bricks every time the shaft E makes a revolution, the relation of the cogs and spaces on the wheels K and R, being so arranged as to cause the wheel K to move forward as soon as the arms D have pressed the plunger F down, so as to fill the moulds, and they are, also, so arranged as to cause the wheel K to move far enough forward to bring a succeeding mould under the plunger every time it moves.

Claim.—The combination of the wheel K and R, the clay box B, the press box H, and the plunger F, when these several parts are constructed, arranged, and operated substantially in the manner described.

No. 30,407.—EDWARD J. HYDE, of Philadelphia, Penn.—*Improvement in Grinding Mills.*—Patent dated October 16, 1860.—The central portion of the disk forms a concave C, to which grain, or any other substance, which is to be ground, is introduced by means of a hopper box, in the usual manner; said concave is arranged with a series of ridges *a*, and it fits over a cone D, which forms the centre of the rotary disk E, and which is rigidly attached to the shaft or spindle F.

Claim.—The arrangement of the eccentric ridges *ff*, concentric ridges *e*, and notched flanges *h*, with the disks B F, and concave C, as and for the purposes shown and described.

No. 30,408.—EDWARD M. JUDD, of New Britain, Conn.—*Improved Window Fastener.*—Patent dated October 16, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination, with a bolt pivotted intermediately of its length or depth, and mortise box or case for carrying the same, and for imbedding it, as specified, of a spring or spring back plate to the box, arranged to act upon the rear of the pivotted bow or bolt by a jog or jogs, or their equivalents, to hold or lock the bolt, both in its open and close conditions, and so as to cause the spring to adjust the bolt to lie, when closed, flush or thereabouts, at its front or opposite finger surfaces, with the mouth of the mortise or face plate of the box, essentially as specified.

No. 30,409.—JOHN W. KELLBERG, of Pittsburgh, Penn.—*Improvement in Churns.*—Patent

dated October 16, 1860.—The operation of this churn is as follows: When the shaft *h* is made to revolve quickly the curved wings cause the cream to be thrown from the centre to the circumference of the churn with so much force as to create a large amount of friction, when it is pressed between the wing or dasher extensions and the sides of the churn, and at the same time a strong current of air is carried through the body of the cream, and any cream, that is forced out over the disk *i*, flows back into the centre to be worked over.

Claim.—The dasher and disk, made and operating substantially as described.

No. 30,410.—GUSTAVUS KLEINWORT, of Albion, Ill.—*Improvement in Uterine Supporters.*—Patent dated October 16, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The ring, or its equivalent, to support the uterus, in combination with the flaps, connected with each other by a hinged joint, and with the ring by hinged braces, so that the instrument may be folded up for insertion, and then spread out, that the instrument may be retained in place without external supporters.

No. 30,411.—SALEM T. LAMB, of New Washington, Ind.—*Improvement in Fastening Blades of Churn Dashers.*—Patent dated October 16, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The interlocking or overlapping of the shanks of the blades *J*, so that they shall serve to hold each other firmly in the staff as described and represented.

No. 30,412.—SALEM T. LAMB, of New Washington, Ind.—*Improvement in Washing Machines.*—Patent dated October 16, 1860.—The roll *F* is turned by a crank *J*, and its fluting taking into those of *E* and pressing the apron therein causes the apron and all the rolls to turn on their journals. By unhooking the bar *I* from the rods *g*, the two levers *G*, with the roller *F* supported on them, can be raised up and swung back clear of the machine.

Claim.—Hanging the roller *F*, in the weighted levers *C*, for the purpose and in the manner set forth.

No. 30,413.—GEORGE SANDERS and HENRY LAMPTON, of Afton, N. Y.—*Improvement in Grain Separators.*—Patent dated October 16, 1860.—This invention relates to a new and improved grain separating device, to be used simultaneously with the grinding mechanism, and interposed between the grain hopper and the eye of the stone.

The inventors say: We claim the arrangement of the spout *F*, with the shoe *E*, screen *f*, trunk *A*, and divided spout *D*, as and for the purposes shown and described.

We also claim the arrangement of the curved partition plate *c*, and shelves *e e*, with the spout *D*, trunk *A*, spout *g*, screen *f*, and hopper *F*, as and for the purposes shown and described.

We also claim the construction of the interior surface of the spout *D*, with the convex sides *i i*, the convex portions made to approach each other, and with enlarged concave ends *i j*, as and for the purposes shown and described.

No. 30,414.—JOHN H. LILLY, of Bardstown, Ky.—*Improvement in Straw Cutters.*—Patent dated October 16, 1860.—This invention consists in the arrangement of three sickle-edged knives in straw cutters, with rests or supporters for the projecting straw while the knives are cutting it off.

Claim.—The arrangement of the three sickle-edged knives *a b* and *c*, with the steel bars *d* and *e*, all the parts being constructed and operating in the manner set forth.

No. 30,415.—JOHN J. LEFFINGWELL, of Newark, N. J., (formerly of St. Louis, Mo.)—*Improvement in Gas Regulators.*—Patent dated October 16, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim, first, interposing between the flanges of the cups or sections of the regulator and the elastic diaphragm, the non-corrosive metal for protecting the flanges and the diaphragm.

Second. I claim clamping the diaphragm between the edges of the metal plates, constructed and operated substantially as described.

Third. I claim connecting the extended part of the regulator, to which the exit or education pipe is attached to the induction pipe by a syphon, constructed and arranged and operating as set forth.

Fourth. I claim the independent valve seat, made of non-corrosive metal, and fitted to the regulator by a grooved joint, in combination with a non-corrosive metal valve, as described.

Fifth. I claim the lever valve *r*, in combination with the tube or opening *g* of the upper section of the regulator, for the purpose of regulating the condition of the atmospheric pressure upon the upper side of the diaphragm as set forth.

No. 30,416.—JOSEPH MARKS, of Boston, Mass.—*Improved Method of Lubricating Engines, &c*—Patent dated October 16, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The mode or process described of saturating, mixing, or impregnating steam, air, gas, &c., with lubricating material for the lubrication of the various working parts of engines and machines operated by steam, air, gas, or vapor, by means of any impregnating, mixing, or saturating apparatus, containing any proper lubricating material through which the steam, &c., is made to pass, and arranged and operating substantially as described.

No. 30,417.—THOMAS J. MAYALL, of Roxbury, Mass.—*Improvement in the Manufacture of Tiles for Flooring*.—Patent dated October 16, 1860.—The claim and engravings show the nature of this invention. The engravings exhibit a top and vertical view of the tiling.

Claim.—The new manufacture of tiles or slabs for flooring, the same consisting of an India rubber or gutta percha composition, which, when combined with various coloring ingredients, made into sheets of suitable thickness, cut or moulded into desired patterns, and vulcanized, produce tiles of the peculiar softness and nature described.

No. 30,418.—HENRY L. NICHOLS, of New York, N. Y.—*Improvement in Slivering Machines*.—Patent dated October 16, 1860.—This invention consists in setting the bevelled cutting point of each slitting cutter at an obtuse angle, more or less, with its shank, so that instead of their cutting perpendicularly into the wood they will make a slanting cut. It also consists in using the slivering cutters in stocks, which are allowed to have a lateral play, so that the point of these slivers will have the grain of the wood where it is not perfectly straight.

The inventor says: I *claim* the slanting pointed cutters $c\ c^1$, when they are arranged in the relation to the two plane irons $d\ d^1$, and operate in the manner described.

I also claim allowing a lateral yielding motion to slitting cutters $c\ c^1$, for the purpose and substantially as set forth.

No. 30,419.—HENRY PORT and EUGENE SURGI, of New Orleans, La.—*Improvement in Boots and Shoes*.—Patent dated October 16, 1860.—By this invention the upper part of the boot or shoe is secured to the sole by means of the tapering metallic rivets passing through holes in frames of metal c , and through the uppers and soles. The holes in the frames are punched with suitable machinery, so that they shall correspond with each other. A last of metal, or faced with metal, is used, against which the rivets are driven and firmly clenched.

Claim.—The metallic skeleton plate or frame C , when used in combination with the sole and upper leather, in the manner and for the purpose specified.

No. 30,420.—LEMUEL POSTLEWAIT, of Russellville, Ohio.—*Improvement in Lathes*.—Patent dated October 16, 1860.— C represents a pulley, which is secured upon the shaft D in such a manner that it may turn freely or revolve upon it; $a\ a$ represent pins, attached to the pulley C , which enter the material to be turned for holding it in a proper position.

Claim.—The combination of the movable pulley C , with the stationary spindle or shaft D , when the same are used in the manner and for the purpose specified.

No. 30,421.—DANIEL R. PRATT, of Worcester, Mass.—*Improvement in Trucks for Locomotives*.—Patent dated October 16, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, attaching the locomotive to the truck by means of the king bolt and swaging bed C , said bed being hung upon the shafts $c\ c$, by means of the connecting rods or bars $d\ d$, substantially as and for the purpose specified.

Second. The employment of the springs and levers, used in connection with the truck as represented, whereby the forward and rear ends of the truck are guided at the same time by the movement of the locomotive substantially as specified.

No. 30,422.—JOHN B. PRESSEY and DANIEL SHEETS, of Suisun City, Cal.—*Improvement in Carriage Springs*.—Patent dated October 16, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A compound spring, composed of two elliptical portions $A\ A$, two scroll portions B and C , shaped portion c , the whole arranged in the manner and for the purposes set forth.

No. 30,423.—A. I. PRESTON, of East Guilford, N. Y.—*Improvement in Machines for Raking and Pitching Hay*.—Patent dated October 16, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination of the vibrating pitcher, with a rotary rake having an intermittent motion, the whole arranged and operating substantially as described, and for the purposes set forth.

Second. I claim the arms J , and shipper fingers j , on the pitcher, in combination with the

retaining levers K, and springing vibrating arm H, the whole constructed and arranged substantially as described, for the purpose of causing the rake to rotate automatically, for the purpose set forth.

Third. I claim, in combination with the vibrating pitcher and automatically rotating rake, the sliding gears, or their equivalents, for changing the speed of the pitcher, substantially as and for the purpose specified.

Fourth. I claim the hinged guides i, in combination with the intermittently rotating rake teeth g, arranged as and for the purpose specified.

Fifth. I claim, in combination with the rotating self-shipping shaft a, the mechanism specifically as set forth, for imparting to the pitcher the vibrating self-reverse motion, as and for the purpose described.

No. 30,424.—WILLIAM W. REID, of Rochester, N. Y.—*Improved Churn*.—Patent dated October 16, 1860.—n is an annular tube attached to the underside of the lid B; this tube is rectangular and made of tin; it is perforated with small holes a a a on its inner and outer face. The diameter of the tube must be small enough to come within the inner edges of the bars I.

Claim.—The annular perforated tube n, in combination with the bars I I and dasher o, for the purpose specified.

No. 30,425.—SHERIDAN ROBERTS, of Cleveland, Ohio.—*Improved Method of Making Barrels*.—Patent dated October 16, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Making the cylinder part or body of barrels from hollow cylinders turned off or rounded from solid cylinders, and then slitted, and a piece taken from or added to, as may be required, to bring the body to the proper dimensions and completed, as set forth.

No. 30,426.—JOHN A. ROEBLING, of Trenton, N. J.—*Improvement in Metallic Railroad Cars*.—Patent dated October 16, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the longitudinal pieces, ribs or uprights, straps and plates which constitute the frame work of the sides and roof of a metallic railroad car, with curved and flat panels, in such manner as to leave a partial space between the panels, and thus forming a non-conducting wall and affording a receptacle for window sashes when required, while the curved and flat panels may be united with any part of the framing with which they come in contact by one single rivet.

No. 30,427.—L. C. ROGERS, of Danvers, Mass.—*Improvement in Tools for Trimming Boots*.—Patent dated October 16, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the knife g, or cutter, and the socket c, so as to allow the knife to travel on the arc of a circle and to admit of its being adjusted or moved toward the guard as fast as it becomes worn, substantially as described.

No. 30,428.—CHARLES H. SAYRE, of Utica, N. Y.—*Improvement in Straps for the Handles of Shovels*.—Patent dated October 16, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Malleable cast iron straps, with pins formed on their inner sides to serve as rivets, and countersunk holes on their outer sides, in the manner and for the purposes described.

No. 30,429.—H. B. SMITH, of Lowell, Mass.—*Improved Blind Slat Machine*.—Patent dated October 16, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim, first, the combination of the apparatus for boring the stiles with the apparatus for driving and setting the staples in the rods, in manner substantially as described, and for the purpose of producing the effect set forth in the specifications.

Second. I claim a sliding rack, having adjustable teeth, when used for the purpose of giving the spaces between the holes in the stiles or the staples in the rods for rolling slat window blinds, substantially as specified.

Third. I claim the hopper or feeder, having a space inside fitted to the staples, and made so as to open substantially as specified.

No. 30,430.—D. SQUIER, JR., and E. A. PRESTON, of Battle Creek, Mich.—*Improvement in Grain Weighing Machines*.—Patent dated October 16, 1860.—In connection with the automatic weighing and discharging apparatus there are arranged an index hand and plate N for registering the quantity weighed during a day, week, or month. This registering is effected

by a rocking plate L pivotted by a shaft *g*, which is alternately moved back and forth by the weight D as it rolls from one end of its lever to the other; from the plate L to a ratchet P motion is communicated by pawls *h h*, and thus at every movement of the weight D the index hand is moved a certain distance, which registers the quantity weighed.

Claim.—The arrangement of the adjustable head blocks G G, slotted lever D¹, and valve C with the rods *i i*, arms J J, valves H H, boxes E E, plate L, wheel P, and index plate N, as and for the purposes shown and described.

No. 30,431.—GEORGE C. TAFT, of Worcester, Mass.—*Improved Screw Wrench.*—Patent dated October 16, 1860.—A is the stationary jaw; B that portion of its shank upon which the movable jaw H slides; C that portion of the shank which is provided with the screw thread *a*, into which the female screw *c* of the nut I works, and D is that portion of the shank upon which the handle F is placed, and where it is securely held between the iron pieces G and nut E.

Claim.—The combination of nut I with its reverse screws *c* and *d*, with screw *a* on the shank part C, and screw *b* on the rear part of the sliding jaw H, substantially as and for the purposes set forth.

No. 30,432.—WILLIAM H. TAMBLING, of Berlin, Wis.—*Improved Bed Bottoms.*—Patent dated October 16, 1860.—When the canvass becomes slack and loose it is readily tightened by turning the screws *c c c*, which cause the slats to recede from the bed rails, thus stretching it tightly over the sides of the rails. By removing the screws the slats can readily be taken out and the bed cleaned.

Claim.—The employment of the slats *a a*¹ and screws *c c* in connection with the canvas B and the side and end rails of the bed, arranged and constructed substantially as and for the purpose specified.

No. 30,433.—D. C. TELLER, of Beaver Dam, Wis.—*Improvement in Sowing Machines.*—Patent dated October 16, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the vertically sliding plates I and turning beams H, from which the shares are suspended, in combination with the hopper D and discharge tube F, constructed and operating substantially as and for the purpose set forth.

No. 30,434.—CHRISTOPHER H. THOMAS, of New Orleans, La.—*Improvement in Prophylactic Remedies.*—Patent dated October 16, 1860.—This medicine is composed as follows: salicine, half an ounce; elixir of vitrol, three drachms; old Bourbon whiskey, ten ounces; tincture of galsaminum, one ounce; the whole to be mixed and bottled for use.

Claim.—The above composition of matter or compound of medicines, as a preventive of yellow fever.

No. 30,435.—JOSEPH W. THORN, of Courtland, Ala.—*Improvement in Cotton Cleaners.*—Patent dated October 16, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, constructing the beater chamber S, as described, of the close box G, and the grid C, springing from a common point at or near the feed rollers, and diverging from each other as and for the purposes set forth.

Second. I claim the combination of the beater chamber S, containing a series of beaters, with the trap door H and the devices for opening and closing the same, and for putting the feed rollers in and out of action, substantially as and for the purposes described.

No. 30,436.—J. EUGENE THOURNE, of New Orleans, La.—*Improvement in Drying Chambers.*—Patent dated October 16, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, a desiccating apparatus, composed of a chamber for the reception of the substance to be desiccated, a feeding apparatus for conveying the substance to and from and through said chamber, and a vessel containing metal or alloy, fusible at a low temperature, to serve as a heating medium; the whole combined to operate substantially as described.

Second. Furnishing the interior of the desiccating chamber with inclined plates *i i*, applied in combination with gutters *k k* and *l l*, substantially as and for the purpose described.

Third. Making the feeding apparatus vertically adjustable along with the removable heads H H of the chamber, and in relation to the box of fusible metal, substantially as and for the purpose specified.

No. 30,437.—NATHAN S. WARNER and HENRY S. BENEDICT, of Bridgeport, Ct.—*Improve*

Ladle with Fork Attached.—Patent dated October 16, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The movable framework C C, attached to the fork, which, in combination with said fork, composes a skimmer, as set forth.

No. 30,438.—JOHN J. WATSON, of Buffalo, N. Y.—*Improved Churn Dasher.*—Patent dated October 16, 1860.—This invention consists in constructing and arranging the dasher.

Claim.—The arrangement of the main dashers D D, with the auxiliary dashers *a a*, and the spiral flange E, when the same are used as and for the purpose specified.

No. 30,439.—SAMUEL WETHERILL, of Bethlehem, Pa.—*Improvement in the Manufacture of Glass.*—Patent dated October 16, 1860.—The inventor says: The proportions which I use in a pot, or batch of glass of 2,000 pounds, are prepared of a mixture of sand 6 parts by weight, oxide of zinc, 4 parts; soda, 2 parts; then add 2 pounds of white oxide of arsenic; 12 to 14 pounds of black oxide of manganese; $\frac{1}{2}$ to $\frac{3}{4}$ ounce of oxide of nickel.

Claim.—The use of the oxide of nickel in the manufacture of glass, substantially in the proportions and manner, and for the purpose set forth.

No. 30,440.—HENRY Y. WILDEY, of Philadelphia, Pa.—*Improvement in Apparatus for Sealing Cans.*—Patent dated October 16, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the socket C and screw plunger D, with the nipple *b*, and air pump A, as shown and described, so that when the air has been exhausted from the can by the pump, the plunger D may be screwed down and cause the wax plug to seal the aperture *a*, all as set forth and described.

No. 30,441.—EEMUND H. GRAHAM, of Manchester, N. H.—*Improvement in Picker Staff Motion.*—Patent dated October 16, 1860.—This improvement has for its object the producing of an accurate and sure motion for picker staves, by an arrangement of devices which, while giving great accuracy of motion, so guides and holds the rocker shaft in its play back and forth as to cause it to operate with the least possible friction and lateral disarrangement or wobbling.

Claim.—The arrangement of the rocker *a a*, and guiding shaft or bar *g g*, travelling in suitable journals or bearings *h h*, and operating together substantially as described.

No. 30,442.—SAMUEL YEATMAN, of Providence, Ala.—*Improvement in Filing Gin Saws.*—Patent dated October 16, 1860.—In the operation of this invention the teeth of the several saws being acted upon consecutively, and the carriage E moved first in one direction and then in the other, the whole length of the line of saws, or each saw, may be finished at once, and the carriage E moved only as each saw is finished.

Claim.—The arrangement of the saw shaft G, saws H, and carriage E, with the saw D, saw shaft C, swinging frame B, and spring stop bar I, as and for the purpose shown and described.

No. 30,443.—H. O. AMES, of New Orleans, La., assignor to himself and F. W. AMES, of the same place.—*Improvement in Evaporating Pans.*—Patent dated October 16, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the partition *a*, in the main box B, substantially as described, in relation to the evaporating pipes D D D¹, the induction and eduction pipes E F, and box C, whereby only one or a limited number of the said pipes D D D¹ are brought into communication with the exhaust chamber *c*.

No. 30,444.—H. WILLIAM DOPP, of Buffalo, N. Y., assignor to J. B. WHITE, of the same place.—*Improvement in Lamps.*—Patent dated October 16, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim, first, the employment of a bellows or elastic diaphragm, operated by a spring or equivalent, for the purpose of driving or forcing the fluid from the body of the lamp toward or in the direction of the burner, substantially as specified.

Second. I claim operating the valve S, and needle point *x*, for graduating and cleaning purposes, by means of a cam groove, or its equivalent, in the stop cock F, in combination with the nozzle *n*, whereby I avoid the necessity of packing, substantially as specified.

Third. I claim the rod *a*, or its equivalent, when used as described, by means of which I am enabled to place the cam stop cock, or its equivalent, beyond the reach of the surplus heat, substantially as set forth.

Fourth. I claim the valve S, in combination with the rod *a*, spring *d*, and cam stop cock F, for the purpose of graduating the size of the flame, substantially as specified.

No. 30,445.—J. W. HARBIN, of Delaware Station, Ind., assignor to himself and R. S. WILLIS, of the same place.—*Improvement in Corn Planters*.—Patent dated October 16, 1860.—This invention relates to an improved mechanical arrangement of devices for operating the agitator and slide of the seed hopper.

Claim.—The arrangement of the spring lever *b*, supported by the standard *F*, and operated by the projecting pins *a a*, upon the traction wheel *D*, in connection with the rod *d*, operating the spring slide *k*, and the rod *c*, operating the agitator *g*, in the manner and for the purposes set forth.

No. 30,446.—B. TYLER HENRY, of New Haven, Ct., assignor to OLIVER F. WINCHESTER, of the same place.—*Improvement in Magazine Fire Arms*.—Patent dated October 16, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, in combination with the hollow breech pin *N*, and the piston *I*, working through and with it, the giving of said piston additional end motion for the purpose of exploding the fulminate, substantially as described.

Second. I also claim, in combination with the hollow breech pin and the piston working through it, the spring catch and rest on the breech pin, and the fillets on the piston, substantially as and for the purpose set forth.

Third. I also claim, in combination with the carrier block *c*, and the spring *s*, placed on top of the breech pin *J*, the so forming of the top of said carrier block near the rear end (as shown at *z z*) as to strike the cartridge forward of the centre, and thus raising the forward end of the cartridge while the rear end is held down by the spring catch, tripping it over and freeing it from the spring, and ejecting it from the gun, substantially as described.

No. 30,447.—WILLIAM MAY, of Winchester, Ohio, assignor to himself and JEROME DE BRUIN, of the same place.—*Improvement in Cultivators*.—Patent dated October 16, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The curved bar *P*, carrying weight *Q*, pressing on the roller *o*, in connection with the curved bars *T* and *O*, substantially as and for the purposes shown and described.

No. 30,448.—JOHN McCARTY, of Philadelphia, Pa., assignor to LEYFERT, McMANUS & Co., of Reading, Pa.—*Improved Horse Shoe Machine*.—Patent dated October 16, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the upper die *N*, with its projection *n*, of the form of the inside edge of the shoe, in combination with the lower die *M*, with its recess of the form of the outer edge of the shoe, the dies being so constructed and arranged that when the said projection penetrates the said recess a space of the desired form of the shoe shall be enclosed by the two dies.

Second. I claim the weighted lever *I*, its rods *K K*, the latter passing through the guides *e e*, of the frame, and being connected to the ram, as specified, and the whole being arranged and combined with the revolving cam *F*, substantially as and for the purpose set forth.

Third. The block *P*, with its rods *q q*, passing through the lower die *M*, and into the recess of the same, in combination with the arm *Q*, lever *S*, and revolving cam *G*; the whole being arranged and operating substantially as described, for the purpose specified.

No. 30,449.—SAMUEL ALDRICH and ALEXANDER ALDRICH, of Washington, D. C.—*Improvement in Devices for Elevating Water from Wells, &c.*—Patent dated October 23, 1860.—This invention consists in the arrangement and combination of the brake lever, pawl, and ratchet, for the special protection of the mechanism.

Claim.—The arrangement of the brake lever *H*, with the sliding rod *h*, and movable pawl *f* attached, in combination with the ratchet crank handle *B*, for the purposes set forth.

No. 30,450.—T. F. ALLEN, of Dyersville, Iowa.—*Improvement in India Rubber Railway Car Springs*.—Patent dated October 23, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The use, in the construction of railway cars, of India rubber balls resting on the truck and supporting the car body, and held between concave plates, substantially as described.

No. 30,451.—FRANCIS ARNOLD, of Middle Haddam, Conn.—*Improved Clothes Squeezers*.—Patent dated October 23, 1860.—The nature of this improvement is shown by the claim and engravings.

The inventor says: I *claim*, first, making the India rubber roller *H*, with a central division *I*¹, in its aperture *I*, to receive a corresponding slitted shaft *I*², substantially as and for the purpose described.

Second. I claim the combination of the oscillating frame *C*, rollers *H*, studs *B*, arranged and operating substantially in the manner as and for the purpose described.

No. 30,452.—WILLIAM H. BABCOCK, of Homer, N. Y.—*Improved Printing Press*.—Patent dated October 23, 1860.—This invention consists in supporting a bed which vibrates in a line or arc, perpendicular or nearly perpendicular to the plate of its face, upon two or more parallel radius rods, in such a manner that the bed shall remain parallel to the face of the platen in all portions of its motion.

The inventor says: I *claim*, first, supporting the vibrating bed C, upon one or more parallel radius rods E E, substantially as and for the purpose described.

Second. The peculiar form of the distributing table P, attached to the vibrating bed C, and arranged relatively to the sweep motion of the inking rollers M, substantially as described and for the purpose set forth.

Third. Operating the gauge T to release the printed card, by means of the catch V, and tripper W, substantially in the manner specified.

No. 30,453.—URIAH BAKER, of Brooklyn, N. Y.—*Improved Egg Beater*.—Patent dated October 23, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The use of the two independent spirals C and E, in combination with the spindle A, and reciprocating agitating slide H, having attached to its ends pins, or other equivalent devices, for rotating the egg beaters simultaneously in opposite directions, as described.

No. 30,454.—DAVID A. BALMER, of Lexington, Ind.—*Improvement in Levelling Mill Stones*.—Patent dated October 23, 1860.—The object of this invention is to arrange the sweeps over the face of a mill stone in such a manner that all the inequalities existing in said face can be easily detected and mended.

Claim.—The arrangement of the ring D, with the set screws E, and central screw B, in combination with the inner ring B, yoke F, and arms I; the whole being constructed and operating as and for the purpose set forth.

No. 30,455.—J. W. BARNES, of Murfreesboro', N. C.—*Improvement in Attaching Horses, &c., to Two Wheeled Vehicles*.—Patent dated October 23, 1860.—This invention consists in a certain combination of parts for the purpose of equalizing the burden and draught of carriage horses.

Claim.—The combination of the fore bar or breast tree *f*, the side bars or shafts *e e*, and swingle tree *b*, with the pole or tongue of a two wheeled cart or carriage, in the manner and for the purposes set forth.

No. 30,456.—HENRY BARTH, of Cincinnati, Ohio.—*Improved Printing Press Feeder*.—Patent dated October 23, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* "feeding out" the paper from a printing press by means of the tape rollers *a b c d*, frame H, receiving table G, and tapes *f*, when combined, arranged, and operating substantially in the manner described, that is, when the rollers *b c* are caused to traverse above the stationary table G, depositing the printed sheet thereon, or when the table G is caused to reciprocate under the stationary tape rollers *b c*, for the purpose of receiving the printed sheet therefrom, in the manner essentially as described.

Second. I claim the elastic supports *e e*¹, carrying the auxiliary tape rollers *d d*¹, when used in combination with the reciprocating tape rollers *a a*¹, *b b*¹, or the reciprocating table G G¹, substantially as described.

No. 30,457.—S. L. BOND, of Greenwood, S. C.—*Improvement in Harnesses*.—Patent dated October 23, 1860.—This invention consists in attaching the collar to the shafts and also the back strap.

Claim.—The combination of the collar B or G, with the back strap I, when both are attached to the thills A A, as and for the purpose specified.

No. 30,458.—GEORGE S. BOSWORTH, of Troy, N. Y.—*Improvement in Car Wheels*.—Patent dated October 23, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The described cast-iron car wheel cast in one piece with the chilled rim connected to the hub by means of a single undulating concavo-convex plate, which has two or more annular waves concentric with the hub and rim, substantially as represented in the drawings.

No. 30,459.—D. R. BROWN and A. C. BABCOCK, of New Haven, Ct.—*Improved Shaft Tug*.—Patent dated October 23, 1860.—This invention consists in making a shaft tug of metal with the upper part hinged to the lower part, so that the tug can be opened to receive the shaft from above, and then cased and clasped securely to enclose the shaft, the whole being capable of being made highly ornamental.

Claim.—A hinged shaft tug, constructed and operating substantially in the manner described.

No. 30,460.—J. H. H. BENNETT, of Hunt's Hollow, N. Y.—*Improvement in Gates.*—Patent dated October 23, 1860.—The gate A is operated by the bent lever D which passes through the hinges of the gate, and which is fastened to the top rail *b* by means of a staple *c* and link *d*. The lower hinge E of the gate consists of two loops *e e'*, the loop *e* being rigidly fastened to the post B, and being provided with a small projecting tube *e** which forms the guide for the upright portion of the lever D for the loop *e'*, firmly attached to the back edge of the gate.

Claim.—The arrangement of the lever D, with the hinge E E, gate A, post B, arm G, cords *h h*, pulleys *i i j j*, posts H, shafts K K, traps J, and plates I I, all as set forth and described for the purposes specified.

No. 30,461.—THOMAS BYRNE, of Baton Rouge, La.—*Improvement in Refrigerators.*—Patent dated October 23, 1860.—This invention consists of a pipe or pipes enveloped with cloth, or any fibrous substance, in combination with a water reservoir for keeping the cloth moist and with a refrigerator or other closed room in which a current of cool air is to be created.

Claim.—The arrangement of a pipe A, which is higher than the refrigerator, and is enveloped with cloth or any fibrous substance F, and has a water reservoir B C on its upper end, and a drip funnel D E encircling it, in combination with a refrigerator G, in the manner and for the purposes described.

No. 30,462.—WILLIAM S. CARR, of New York, N. Y.—*Improvement in Valves for Water Closets.*—Patent dated October 23, 1860.—This invention consists of a sliding plunger valve, that either allows the water to run through it to the closet, or effectually, but gradually, shuts off the flow of water, and said valve is operative only when relieved of pressure by the person rising from the seat, or otherwise.

Claim.—A hollow plunger valve moving within a cylinder and controlled substantially as specified, to form both a water way and valve, as set forth.

No. 30,463.—JOHN C. CLINE, of Camden, N. J.—*Improved Arrangement of Mechanism in Sawing Machines.*—Patent dated October 23, 1860.—This machine is designed for use in places where steam power cannot be economically employed, all parts of it being arranged with a view to the use of as little gearing as is consistent with the peculiar capacity in the machine of speedy adaptation to the circular or scroll saw, as occasion may require.

Claim.—The arrangement of the fly-wheel, pinion, circular saw, crank J, and scroll saw, in the manner and for the purpose substantially as set forth.

No. 30,464.—JAMES B. COFFIN, of Hayesville, Ohio.—*Improvement in Washing Machines.*—Patent dated October 23, 1860.—This invention consists in the arrangement of two disks operating in an ordinary wash-tub, one for pounding and the other for rubbing and squeezing the clothes, on the opposite ends of a vertical shaft, in combination with a swivel head to which said shaft is fastened by a spring-catch, and which has its bearings in the arms of a double slotted oscillating lever in such a manner that either one of the disks can be brought to operate on the clothes, and that the rubber may be used for rubbing or squeezing, as may be desired.

The inventor says: I *claim* the arrangement of the disks F and G, one being provided with pins *i*, and the other with squares *b*, attached to the opposite ends of an arbor *f*, in combination with the swivel head E, and with the oscillating double slotted lever D, constructed and operating substantially as and for the purpose set forth.

I also claim the arrangement of the spring catch *h*, in combination with the grooves *g*, in the arbor *f*, for the purpose described.

No. 30,465.—CHARLES W. CURTISS, of New Haven, Ct.—*Improved Collapsible Bucket.*—Patent dated October 23, 1860.—The claim and engravings explain the nature of this invention.

Claim.—As a new article of manufacture, a portable bucket made of a skeleton or frame composed of a bottom and one or more rims, and covered with India rubber cloth, or any other suitable material, when the whole is constructed and fitted for use, substantially as described.

No. 30,466.—FRANCIS B. DEKRAVENAN, of New York, N. Y.—*Improvement in Lamps.*—Patent dated October 23, 1860.—This invention consists in the application to the flame of a lamp of an impelled current of air driven by suitable mechanism, and striking the flame at or near the base in such a manner that the carbon is entirely consumed; and said current of air being independent of the flame itself is not affected by changing position or moving the lamp from place to place.

Claim.—A lamp supplied with an impelled current of air from a suitable blowing apparatus, effecting the new and useful results specified.

No. 30,467.—ABRAHAM DENNY and EDWARD MAYNARD DENNY, of Waterford, Ireland.—*Improved Apparatus for Singeing Pigs.*—Patent dated October 23, 1860; patented in England February 2, 1860.—This invention relates to singeing off the hairs, bristles, and other matter on slaughtered hogs which are converted into bacon, in a cheaper manner than heretofore, by the action of flame or heat in a stove or heated chamber.

Claim.—The apparatus for singeing off the bristles, hairs, and other superfluous matters upon the surfaces of the carcasses of pigs, by the action of flame or heat in a stove or heated chamber, substantially as specified.

No. 30,468.—ISAAC DETHERIDGE, JR., of New York, N. Y.—*Improved Knife Cleaner.*—Patent dated October 23, 1860.—This invention consists in the construction and arrangement of the parts comprising the machine.

Claim.—The operating parts, to wit: the lever and cams L and E working the bar I, in combination with the adjustable bar J; the whole constructed and arranged substantially as and for the purposes described.

No. 30,469.—ARTHUR DE WITZLEBEN, of Washington, D. C.—*Improved Envelope Ruler.*—Patent dated October 23, 1860.—The lines *g h i k* and the two other sizes in Fig. 1 are ruled to suit business directions, with the lines far apart; the opposite side of the card, shown by Fig. 2 has lines *a b c*, &c., ruled close together, to suit the handwriting of ladies or others writing small hands.

Claim.—A card A, ruled as described, and used as an envelope ruler.

No. 30,470.—HENRY H. DODGE, of Georgetown, D. C.—*Improvement in Gas Burners.*—Patent dated October 23, 1860.—This invention consists in an improved apparatus for making the pressure of the gas regulate the quantity of gas allowed to flow to the burner, so that where the pressure is very great the volume allowed to pass will be small, and vice versa. The apparatus is intended to be applied directly to each gas burner, or to the service pipe after it has passed through the meter.

Claim.—Regulating the flow of gas to the burner, in the manner and for the purposes described.

No. 30,471.—WILLIAM A. DUDLEY, of Petersburg, Va.—*Improvement in Apparatus for Removing Calculi.*—Patent dated October 23, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination of the bag E and arms D, for the purpose of catching and enclosing the stone to be subjected to the action of a solvent, substantially as described.

Second. The detachable segmental head B, applied to the catheter or canular of an instrument of this description, for the purpose of facilitating its introduction, as set forth.

Third. The combination of the tube *c* and its arms D and bag E with a catheter A, forming a new and useful instrument for the enclosure, dissolution, and removal of calculi from the human bladder, substantially as set forth, without resorting to the use of the knife.

No. 30,472.—J. H. FISHER, of Placerville, Cal.—*Improvement in Railroad Car Seats and Couches.*—Patent dated October 23, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the jointed back E of the seat B and the removable cushion *g*, in connection with the supplemental hinged cushion *h*, the above parts being arranged in relation with the seats A A, as described, to form the lower berth.

Second. The platform D, guides C C, and uprights *o o*, arranged and combined as shown, to admit of said platform being adjusted in a horizontal position for use, or being removed out of the way when not required.

Third. The side guard F, attached to the platform D by means of the arms *r*, substantially as shown, to admit of the guard being adjusted to the platform, so that the latter may be shoved down between the guides C C, as set forth.

Fourth. Connecting the curtain E to the platform D by means of the cords *q q*¹, arranged substantially as shown, so that the curtain may be raised and lowered automatically by the movement of the platform.

No. 30,473.—PERRY G. GARDINER, of New York, N. Y.—*Improvement in Cotton Presses.*—Patent dated October 23, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement of toggle joints, in combination with segments situated opposite each other, the faces of said two segments forming together a nut and operated simultaneously together by a screw or worm fast on an upright shaft, in the manner and for the purpose substantially as specified.

Second. I claim the arrangement and construction of the top frame C in combination with the upright shaft E and segments L L¹, and so arranged that said top frame shall receive the whole strain of the press and contain all the mechanism which operates the top platen D, substantially as described.

Third. I claim the arrangement and combination of the different parts, constructed and operating together in the manner set forth and for the purposes substantially as described.

No. 30,474.—JOHN GILCHRIST, of Berlin City, Wis.—*Improvement in Spoke Machines*.—Patent dated October 23, 1860.—The cutter of this machine consists of a horizontal shaft to which are fastened two or any suitable number of blades B; these blades are each as long as the spokes to be cut, so as to cut the whole length of the spoke at one operation; the cutting edge of each blade is slightly curved where it is intended to cut the thicker end of the spoke in order to produce the slightly curved outline of the end of the spoke.

Claim.—The combination and arrangement of the revolving cutter B, spoke carriage I, lever H, spring G, slot S, pivot W, pattern C, guard E, screw wheel O¹, and screw D, substantially in the manner and for the purposes described.

No. 30,475.—COLLINS W. GRIFFITH, of Dayton, Ohio.—*Improved Device for Adjusting the Rake of Muley Saws*.—Patent dated October 23, 1860.—This invention consists of scroll saws, and in fastening the saw to the stock in such a manner that it may be readily adjusted so as to cut more or less at a stroke, and so that it will work without a guide or sash, and without being strained.

Claim.—Fastening one end of the saw to the stock, substantially in the manner described, so that it may be adjusted to give it the desired rake or cut.

No. 30,476.—DAVID A. HOPKINS, of Bergen, N. J.—*Improvement in Railroad Chairs*.—Patent dated October 23, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the chair constructed with a longitudinal key seat below the rail, in combination with the key C, as described.

Second. The combination of the wedge C with a tapered key D, substantially as shown, by which the wedge C is adjusted and kept in place, as described, and also the mode of securing the key in place by means of a curve in the end of the mortise through which it is driven, as stated.

Third. So forming the chair as to leave space immediately at the ends of the rails between their lower flanges and the lips of the chair, as set forth, for the purpose specified.

No. 30,477.—JOHN M. JONES, of New Orleans, and JOSEPH CHARPENTIER, of Pattersonville, La.—*Improvement in Bagasse Furnaces*.—Patent dated October 23, 1860.—This invention consists in adapting an ordinary bagasse chimney to the double purpose of burning bagasse as a waste and as a fuel for heating steam boilers, by providing a damper in the chimney just above the feed opening and extending to the base of the chimney horizontally in the form of an arch, said arch having two diameters and having the same communication with the boiler by means of a valved passage.

Claim.—The combination and arrangement of the chimney F with bagasse burning chamber A, at its base, horizontal arch B, boiler furnace C d, and dampers E c, substantially in the manner and for the purpose set forth.

No. 30,478.—ALBERT F. JOHNSON, of Boston, Mass., assignor to A. B. ELY, of Newton, Mass.—*Improvement in Sewing Machines*.—Patent dated October 23, 1860.—The nature of this improvement is shown by the claim and engravings.

The inventor says: I *claim*, first, interlacing two endless threads and forming the double thread chain stitch by means of a revolving hook, substantially as set forth.

Second. I claim a revolving hook or looper, so constructed as to make a series of double thread chain stitches, when operated in connection with a reciprocating needle.

Third. I claim the peculiar construction of a hook, with its hollow shaft or groove, substantially as described.

No. 30,479.—D. A. JOHNSON and F. M. GIBSON, of Boston, Mass.—*Improvement in Carriage Wheels*.—Patent dated October 23, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Making the felloe joints in wooden wheels by halving the ends of the felloe together, surrounding the joint by a metallic band, provided with an inner projecting socket

piece or thimble, and inserting the outer end of the spoke through the thimble and band into the inner half *n* of the felloe, substantially as shown and described.

No. 30,480.—W. J. JOHNSON, of Newton, Mass.—*Improvement in Pumps*.—Patent dated October 23, 1860.—The foot piece A terminates in a collar B, which embraces the cylinder and may be slid up and down upon it; it can be secured in any desired situation by turning the clamp screw C and thus tightening the collar B around the cylinder.

Claim.—The arrangement, with the cylinder of a portable pump having a suction orifice E at its bottom, of an adjustable stirrup A B, whether the part A is hinged or not, substantially as and for the purposes set forth

No. 30,481.—FREDERIC KETTLER, of Milwaukee, Wis.—*Improved Rotary Engine*.—Patent dated October 23, 1860.—This invention consists of a stationary cylinder, which is in the form of a circular ring, and a revolving disk with inserted pistons, the latter working as throttle valves in the inner periphery of the cylinder during the rotary motion of the disk; also, machinery to regulate the alternate motion of the rotary engine.

Claim.—A rotary engine, constructed and operating substantially as described.

No. 30,482.—FRANCIS L. KIDDER, of Brooklyn, N. Y.—*Improvement in the Running Gear of Vehicles*.—Patent dated October 23, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Connecting the axle to the lower segment of the fifth wheel by the clip eyes 2 2, and gudgeons 1 1, for the purposes and as specified.

No. 30,483.—DAVID LANDIS, of Lancaster, Penn.—*Improvement in Screens for Flour Bolts*.—Patent dated October 23, 1860.—This invention consists in the use of a rotating screen and box, placed above the bolt chest, and so arranged as to effect the desired end.

Claim.—The rotating cylinder D, and screen E, the latter being placed within the former, and both arranged essentially as shown, and in such relation with the bolt to operate as and for the purpose set forth.

No. 30,484.—WILLIAM J. LANE, of Chappaqua, N. Y.—*Improvement in Lifting Jacks*.—Patent dated October 23, 1860.—This invention consists in the use of a sliding clamp attached to a lever having a movable fulcrum, and fitted in a suitable stock, in connection with a slide bar which passes through the clamp and has its lower end fitted in the stock; all the parts being arranged, so that a portable lifting jack is obtained which may be readily manipulated and applied to its work.

Claim.—The employment or use of the plate or clamp E, lever D, arm C, and bar F, applied to a stock or upright A, and all arranged essentially as and for the purpose set forth.

No. 30,485.—JOSEPH F. LETELLIER, of Grand Rapids, Mich.—*Improvement in Steam Valves*.—Patent dated October 23, 1860.—This invention consists in the peculiar construction of the shell; also, in combining therewith the governor and throttle valves.

Claim.—The shell as constructed, and in combination therewith the throttle valve C, and governor valve B, all arranged substantially as and for the purposes set forth and described.

No. 30,486.—SYLVESTER MARSH, of Roxbury, Mass.—*Improvement in Grain Bins*.—Patent dated October 23, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement, in grain bins of suitable form and otherwise ordinary construction, of a series of perforated tubes, open at both ends, secured to and inserted in corresponding holes in the bottom of said bins, so that the external air may penetrate and pervade the whole mass or body of grain, substantially in the manner and for the purposes set forth.

No. 30,487.—WALLACE LYON, of Deep River, Conn.—*Improved Bit Stock*.—Patent dated October 23, 1860.—The object of this invention is to obtain a bit stock that will allow the bit to be rotated with varying degrees of speed under the same speed of the crank, or driving shaft, thereby enabling the implement to be adapted to different kinds of work, and rendering one and the same implement capable of more general adaptation than usual.

Claim.—The arrangement of the permanent and shifting gearing *f h i j k*, placed respectively on the shafts C E F, and within the stock A, substantially as and for the purpose set forth.

No. 30,488.—JAMES MACDONOUGH, of New York, N. Y.—*Style of Engraving Bank Notes, &c.*—Patent dated October 23, 1860; antedated April 23, 1860.—The object of this inven-

tion is to produce additional guarantee against the counterfeiting of bank notes, stocks, bonds, certificates, coupons, and all other papers printed from engraved plates representing value, and requiring such protection.

The inventor says: I *claim* as a new art in bank note, bond, and other document engraving, the combined use in repetition of the value or denomination, and of the configuration, substantially as and for the purpose described.

And I also claim the combined use in repetition of the value or denomination of the bank note or other document, the name or title of the person, corporation, or institution, and the configuration of geometrical, cycloidal, waved line, or rosette work, substantially as described and set forth.

No. 30,489.—DANIEL LOMBARD, of Boston, Mass.—*Improvement in Rice Hulling Machines*.—Patent dated October 23, 1860.—The object of this invention is to remove the husk from the grains of the rough rice, or "paddy," and its nature consists of the mechanical devices employed for that purpose.

Claim.—The arrangement of a wire studded belt passing over drums and between serrated metallic plates, or their equivalents, and the back *m*, and supported on the ledges secured to *l*, all operating together, substantially as and for the purpose described.

No. 30,490.—JOHN McARTHUR, of Aurora, Ill.—*Improved Method of Elevating Water from Wells, &c.*—Patent dated October 23, 1860.—This invention consists in the employment of a swinging balanced spout, in connection with a windlass and buckets and two stationary spouts, all being arranged in a suitable curb or box, to effect the desired end.

Claim.—The swinging and balanced spout *I*, in combination with the two stationary spouts *C C*, in the curb *B*, and the shaft *D*, provided with the pulleys or wheels *E E*, over which the bucket chains *F F* pass, the arms *H H*, of the spout *I*, being placed on the shaft *D*, and all arranged essentially as and for the purpose set forth.

No. 30,491.—JAMES B. MOHLER, of Pekin, Ill.—*Improvement in Grain Weighing Machines*.—Patent dated October 23, 1860.—The object of this invention is to obtain, by a simple arrangement of means, a device which will receive a continuous flow of grain from a hopper, weigh and register the grain, and discharge it into any proper receptacle, the whole device working automatically, the gravity of the grain being the only motor.

Claim.—The arrangement of the pivotted rhomboidal and divided receiving box *F*, cam *H*, lever *I*, and rod *J*, with the scale beam *B*, rods *C D*, shaft *E*, ratchet wheel *K*, index *L*, and plate *M*, as and for the purposes set forth and described.

No. 30,492.—F. MOORE, of Panola, Miss.—*Improved Fan Ventilating Bedstead*.—Patent dated October 23, 1860.—This is an improvement in bedsteads whereby a fan is kept in motion for any desirable length of time, for the purpose of fanning the sleeper, and keeping flies and mosquitoes away.

Claim.—The arrangement of the pendulum fan *K K*, rod *L*, gearing *G h F*, and arms *b*, and cords *a*, with the bar *D*, bed frame *B*, and bedstead *A*, as and for the purposes shown and described.

No. 30,493.—MURDOCH MURCHISON, of Denmark, Tenn.—*Improvement in Cotton Presses*.—Patent dated October 23, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the arrangement of a horizontal and tilting press box *B*, with a horizontal follower *H*, levers *M*, tackles *d*, and windlass *E*, when constructed and arranged substantially in the manner and for the purpose described.

I also claim hanging the cotton box *B*, by its trunnions in the horizontal slots *h* of the frame, so that the press box, when in its horizontal position, can be moved longitudinally towards the resisting sill, and thus relieve said trunnions from all strain while the cotton is pressed, substantially in the manner described.

No. 30,494.—FREDERICK D. NEWBURY, of Albany, N. Y.—*Improvement in Revolving Fire Arms*.—Patent dated October 23, 1860.—In using this invention, after being loaded and capped in the usual manner, draw back the hammer by the thumb, then the hook end at the notch, seizing upon the projecting shoulder of pawl *P*, draws the rear end of the trigger upwards, until the shoulder fits into the notch in the position shown in the engravings, blocking the hammer there. At the same time, pawl *K* having been lifted upwards, turns the plate *D* with the cylinder, bringing one of its chambers in range with the barrel, and its cone in range with the hammer, holding it firmly there as long as there is any pressure upon the trigger.

The inventor says: I *claim*, first, the cocking notch lying at the base of the hook or claw of the hammer, as described, in combination with the shoulder *y*, of the pawl *P*.

Second. The spring *v*, so arranged as by one operation to regulate the pawl *P*, and at the same time act as a spring upon the trigger.

Third. Ratchet pawl *K*, pivotted to the trigger, fitted and formed to act as a pawl and bolt, in combination with the holes *j j*, in plate *D*.

No. 30,495.—W. H. OAKES, of New York, N. Y.—*Improvement in Plate Printing*.—Patent dated October 23, 1860.—The nature of this invention is explained by the claim and engravings.

The inventor says: I *claim*, first, printing from engraved plates by having the sunken portions thereof, which form the design to be printed, charged or filled with fluid ink from below the plate, the ink being forced up through perforations in the plate against the paper or substance to receive the impression, while said paper or other substance is pressed upon or against the plate.

Second. The arrangement of the ink reservoirs *J K*, with the pipes *I H*, tubes *T G*, pump *M*, and grooves *a* j*, in the block *F*, and bed *U*, in connection with the perforated plate *V*, substantially as and for the purpose set forth.

No. 30,496.—ADAM OOT, of Minetto, New York.—*Improvement in Car Couplings*.—Patent dated October 23, 1860.—*A A* is the bumper or draw head of a car. The socket *B B* is made flaring at its front end in every direction, so as to readily admit the coupling link *D*. The socket at the front end is made larger than at its rear end, or from the front to the rear ends of the socket it diminishes in size.

Claim.—The combination of the peculiarly constructed draw head, *A B a b c*, with the peculiarly constructed gravitating lever hook *C m f g*, in the manner and for the purpose described.

No. 30,497.—N. A. PATTERSON, of Kingston, Tenn.—*Improvement in Cotton Gins*.—Patent dated October 23, 1860.—The case or box *A*, adjoining the rollers *B*, is of curved form, approximating to the curve in which the rollers are placed; the lower part, however, of the curved part *b* of the case is brought quite near to the lowermost roller *B*, a space *c* being left sufficient to just admit the cotton seed passing out.

Claim.—The combination, with the combined fan and brush cylinder *C* of the rollers *B*, when the above parts are arranged to operate together in the manner and for the purpose shown and described.

No. 30,498.—GEORGE P. PLANT and JULIUS RATH, of Saint Louis, Mo.—*Improvement in Ventilating Mill Stones*.—Patent dated October 23, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement together, as shown and described, of the sucking and drawing fan *B*, settling room *J*, hung with cloths *K*, dust tube *G*, curb *A*, tube *F*, stone *E*, spout *H*, and clapper *I*, so that a current of air will be drawn down the eye of the stone through the furrows to ventilate the stone, and so that the dust will, at the same time, be drawn up away from the stones and driven into the settling room *J*, where it will be received by the cloths *K*, all as set forth.

No. 30,499.—MILES PRATT, of Watertown, Mass.—*Improvement in Cooking Stoves*.—Patent dated October 23, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The employment of the independent return flue *G*, in combination with the independent oven *B*, when the whole is so constructed and arranged that the products of combustion shall first pass entirely around the oven, in direct contact with it and surrounding the return flue *G*, and then through the said return flue, as specified, for the purpose set forth.

No. 30,500.—A. RANDEL, of New York, N. Y.—*Improvement in Presses*.—Patent dated October 23, 1860.—The object of this invention is to obtain a press of simple and economical construction, which will admit, under the same application of power, of giving two different degrees of pressure, so that the substance may be compressed expeditiously and in a proper manner.

Claim.—The rack bars *E E*, provided with the racks *a a b*, and actuated through the medium of the pinions *c c*, in connection with the cross head *F*, provided with the pawls *j*, and actuated through the medium of the eccentrics *m m*, all being arranged essentially as and for the purpose set forth.

No. 30,501.—MICHAEL E. RUDASILL, of Shelby, N. C.—*Improvement in Machines for Cutting Stalks, &c.*—Patent dated October 23, 1860.—This invention consists in the use of the revolving cutter, in connection with the stationary frame provided with knives.

Claim.—The employment of the revolving reel, composed of the rims or disks *H H*, and

knives *a a*, in combination with the stationary reel composed of the rims *I I*, and knives *c c c*, the same being arranged and used substantially as and for the purpose specified.

No. 30,502.—PHILANDER SHAW, of Abington, Mass.—*Improved Boot Crimping Machine*.—Patent dated October 23, 1860.—The following is the operation of this machine: The leather *K*, to be crimped, is cut of the proper size and form, and is placed under the brake *C*; the corners *p* are caught between the jaws of the nippers *F*, and there secured by turning the screws *f*; the handle *r* of the brake is then brought down, and the leather is forced between the jaws *B*. As the crimping proceeds, the slack of the leather is taken up by moving the handle *k*, in the direction of its arrow, which moves the cam *G*, under the pin *l*, and raises the block *E*; this draws up the corners *p*, of the leather *K*.

The inventor says: I *claim*, in combination with the sliding block *E*, and nippers *F*, the eccentric arc *G*, with its hand piece *k*, ratchet wheel *H*, and retaining pawl *n*, the whole arranged and operating as described, for the purpose set forth.

I also claim the employment of an index on the ratchet wheel *H*, in combination with the stretching device, substantially as described, for the purpose set forth.

No. 30,503.—MILES J. SHINN, of Richmond, Ind.—*Improved Apparatus for Detecting Fraud in Ballot Boxes*.—Patent dated October 23, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the “detector” described, or any equivalent for the same, attached to a ballot box, to indicate and expose tampering with the lock or cover of the same

Second. I claim the device described as a “register” for registering the number of votes polled, consisting of ratchet wheel *R*, index wheels *O* and *P*, slide *U*, rocking shaft *N*, with arms *11 11* and *b*, and thumb lever *H*, together with lock pin *M*, falling lever *k*, stops *L L*, all arranged substantially as and for the purpose set forth.

No. 30,504.—ABIJAH SMITH, of Kingston, N. Y.—*Improvement in Machines for Dressing Stone*.—Patent dated October 23, 1860.—The nature of these improvements are shown by the engravings and claim.

Claim.—The combination of vibratory beams *A B C*, connecting rods *c d e*, crank *K*, of the shaft *W*, lever *E*, having the stay rods attached thereto, and the serrated iron tools and rubbers; these several parts being constructed and arranged for operation in the manner described, for the purpose set forth.

No. 30,505.—IRA A. STAFFORD, of Essex, N. Y.—*Improved Furniture Castor*.—Patent dated October 23, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Making a joint in the castor stirrup, so as to enable it to reverse its position and form an angle right or left, in the manner described, and for the purposes specified.

No. 30,506.—IRA A. STAFFORD, of Essex, N. Y.—*Improvement in Machines for Elevating, Cleaning, and Bagging Grain*.—Patent dated October 23, 1860.—This invention relates to cleaning and sacking grain, and consists in the construction of an endless belt, frame, and screen, which may be attached and secured to any fanning mill, in such a manner as to receive the grain as it is separated from the chaff, elevating it, and screening off the heavy impurities and depositing it in a sack.

Claim.—The peculiar construction and attachment of the elevating and screening mechanism as applied to a fanning mill, for the purpose of sacking grain, as set forth.

No. 30,507.—NATHANIEL M. STRATTON, of New York, N. Y.—*Improvement in Fences*.—Patent dated October 23, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The construction of fence described, consisting of the rails *C C*, and pickets *B B*, united by means of hooks *A A*, on the one part and corresponding notches or slots in the other part, the hooks and recesses being adapted to fit together so that the parts are kept in their proper positions without any additional means, and so as to cause the pickets to stand erect when the line of the fence is inclined, all substantially as set forth.

No. 30,508.—JOHN S. STUART and ASHEL L. CORSON, of Marblehead, Mass.—*Improved Machine for Dressing Boot and Shoe Heels*.—Patent dated October 23, 1860.—The nature of this invention is shown by the claim and engravings.

The inventors say: We *claim* the explained mode of applying the knife carrier *E*, to the spring lever *I*, viz: by the pivot *i*, and the arm *f*, adjustable with respect to the lever and connected with the knife carrier, substantially as described.

We also claim the combination and arrangement of the regulating lever *N*, and screw *O*, with the knife carrier *E*, its guide roller *M*, and pattern *a*

We also claim the arrangement of the bearing faces of the heel supporting jaws with respect to the plane of movement of the cutter in making the bevel of the sides of the heel.

No. 30,509.—A. E. TAYLOR, of Ogdensburg, N. Y.—*Improved Bell Attachment*.—Patent dated October 23, 1860.—This invention consists in arranging with a stationary bell, attached to a door, or door post, a striking mechanism in such a way that by rotating a crank in either direction a hammer will be actuated and the bell struck.

Claim.—The hammers *g*, operating through the medium of the revolving arbor *E*, studded disk *F*, lever *D*, and the lever or levers *d*, with the spring or springs *f* and *h*; the above parts being arranged relatively with the bell *C*, to operate as and for the purpose set forth.

No. 30,510.—J. D. TRACY, of Springfield, Mass.—*Improved Attachment for Bridle Bits*.—Patent dated October 23, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The construction of the bit with the lower parts of the cheek pieces *B B*, made in loop form, and provided with muzzling rods *e e*, so as to prevent the animal from biting, all as shown and described.

No. 30,511.—NATHAN B. WEBSTER and ROBERT W. YOUNG, of Portsmouth, Va.—*Improvement for Preventing the Incrustation of Steam Boilers*.—Patent dated October 23, 1860.—The claim explains the nature of this invention.

Claim.—Connecting with the interior of a steam boiler a metal electro-negative to the metal of the boiler, substantially as and for the purpose set forth.

No. 30,512.—JESSE B. WHEELER, of Chicago, Ill.—*Improved Machine for Drying and Cooling Grain*.—Patent dated October 23, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement of the inclined perforated bottom *C*, and the hot air passages connecting the chamber above it with the air heating chamber, substantially as described.

Second. I also claim, in combination with the drying chamber, the external perforated trunk *G*, and the fan blower *D*, for drawing the moistened and heated air from the grain and returning it to the heating chamber, whilst cooler air takes its place among the grains, substantially as described.

No. 30,513.—JOHN P. WILSON and FREELove V. WILSON, of Ilion, N. Y.—*Improved Revolving Spool Stand*.—Patent dated October 23, 1860.—This invention consists in constructing and arranging the several parts of the spool stand.

Claim.—The described article of manufacture, constructed and arranged substantially in the manner and used for the purpose specified.

No. 30,514.—GURDON G. WOLFE, of Troy, N. Y.—*Improvement in Cooking Stoves*.—Patent dated October 23, 1860.—The nature of this improvement is shown by the claim and engravings.

Claim.—The combination and arrangement of the air heating chamber *G*, hot air passage *H*, opening *J*, flue space *K*, opening or openings *L*, and aperture or apertures *M*, with the oven *A*, fire box *B*, and smoke flues *C*, along the top, back, and bottom of the oven, substantially as shown and described.

No. 30,515.—RICHARD B. WRIGHT, of Norfolk, Va.—*Improved Ventilator for Railroad Cars*.—Patent dated October 23, 1860.—The claim and engravings show the nature of this invention.

The inventor says: I *claim*, first, hinging a dust and spark deflector between two car windows, so that it may be applied to either of the windows, according to the direction in which the car travels, as set forth.

Second. A V-shaped frame *C C*¹, hinged at *J*, and provided with a sash *D* in the centre of the said V-shaped frame, in combination with a wing of wire gauze *H*, hinged to the edge of the sash, so as to shut against either of the arms *C* or *C*¹ of the V-shaped frame, substantially as and for the purposes set forth.

No. 30,516.—A. T. BALLANTINE, of New York, N. Y., assignor to himself and T. O. CONKLING, of same place.—*Improved Box for Dropping Sugar*.—Patent dated October 23, 1860.—This invention consists in arranging at the bottom of a hopper, of any desirable shape or capacity, a discharging device, whereby a definite quantity of sugar will be discharged from the hopper by the movement of a lever suitably applied to the box. It further consists in the employment of a wire agitator, which is operated by the dropping device so

as to keep the sugar loose in the hopper and prevent it from clogging up the throat of said hopper.

The inventor says: I *claim*, first, the combination, with a suitable hopper A, of a rotary dropping wheel C, spring *c*, lever D, pall *e*, and ratchet wheel, or their equivalents, arranged and operating as and for the purposes set forth.

Second. I claim the vibrating wire frame G placed within the hopper A, and operating as and for the purposes set forth.

No. 30,517.—EDWARD BURKE, of Philadelphia, Pa., assignor to himself and ABRAHAM SULGER, of the same place.—*Improvement in Seats and Couches for Railroad Cars*.—Patent dated October 23, 1860.—This invention consists in a peculiar construction of seats for sleeping cars, whereby they may be readily converted into couches without in any degree detracting from their utility as seats with reversible backs; also in certain platforms arranged to slide on vertical rods, connected permanently to the side of the car, the said platforms being connected to each other and the roof by jointed rods.

The inventor says: I *claim*, first, the described arrangement of the sliding boards H and H¹, with their legs *a a*, the hinged leaves I, when the whole is combined with the base D of a car seat having the usual reversible back G, as set forth.

Second. I claim the platforms J and K, guided and retained in position by the permanent rods M and L, connected together by the jointed rods P, and to the roof by the jointed rods N, the whole arranged and operating as and for the purpose specified.

No. 30,518.—GEORGE FELTER, of Philadelphia, Pa., assignor to S. PANCOAST, of the same place.—*Improvement in Sewing Machines*.—Patent dated October 23, 1860.—This invention relates to improvements in that class of sewing machines in which discoidal shuttles or spool cases containing ordinary spools of cotton are used.

The inventor says: I *claim*, first, the combination of the hollow spindle G, carrying the hook N, with the stationary shaft I, the hollow disk J, and annular cap L and discoidal spool case, the whole being arranged and operating substantially as set forth and for the purpose specified.

Second. I claim the guard M, or its equivalent, carried by the hollow spindle G, and arranged in respect to the needle *x* and hook N as specified.

No. 30,519.—GEORGE C. GOURLAY, of New York, N. Y., assignor to himself and ANDREW HUNTLEY, of the same place.—*Improvement in Port Lights for Vessels*.—Patent dated October 23, 1860.—The object of this invention is to obtain a port light that may be applied to vessels, either iron or wooden ones, with facility, and so fast as to form a perfectly water-tight joint.

Claim.—The construction of the face of the rim A with one or more annular grooves *c*, as shown and described.

No. 30,520.—CALEB H. GRIFFIN, of Lynn, Mass., assignor to WALTER D. RICHARDS, of Boston, Mass.—*Improved Machine for Cutting Boot and Shoe Soles*.—Patent dated October 23, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the combination of the travelling pressure bar F and block with the rotating die block J and dies *g*, when such are held stationary during the operation of cutting, substantially as described.

I also claim the stop bolt K, as operated, and notched disk Q, or their or either of their equivalents, in combination with the rotary die block J, for the purposes described.

I also claim the described combination of the disk *l*, spring catch *o*, and notched ring gear wheel H, as operated, or their or either of their equivalents, with the rotary die block J and its pinions R and shaft *p*, for the purpose set forth.

And, lastly, I claim the gauges *y*, as arranged, constructed, and operated, for the purpose described.

No. 30,521.—FERDINAND F. MYER, of New York, N. Y., assignor to himself and AUGUSTUS SCHELLER, of the same place.—*Improvement in the Manufacture of Chloride of Lead*.—Patent dated October 23, 1860.—The inventor says: I take sulphate of lead and mix it into a thin paste with a concentrated solution of chloride of sodium, or common salt, and in this state it is introduced into a saturated hot solution of chloride of sodium, where the same is decomposed. The largest portion of the lead precipitates as chloride of lead, and another portion, together with the impurities, remains in solution.

Claim.—The method, substantially as described, of treating sulphate of lead with chloride of sodium, for the purpose set forth.

No. 30,522.—THOMAS A. MORRIS, of Green Bay, Wis., assignor to himself and T. K. SCHETTLER, of the same place.—*Improvement in Crushing and Pulverizing Quartz*.—Patent dated

October 23, 1860.—This invention consists in the use of one or more pairs of crushing rollers of a peculiar form in connection with a rotating cylinder provided with a bed of novel construction, and with drags.

The inventor says: I *claim*, first, the rotating cylinder E, provided with a bed or bottom formed of rocks *g*, in connection with the drags H, one or more, arranged substantially as and for the purposes set forth.

Second. The combination of one or more pairs of crushing rollers B B with the rotating cylinder E and drags H, one or more, arranged for joint operation, as and for the purpose specified.

No. 30,523.—JOHN J. WATSON, of Buffalo, N. Y., assignor to himself and SOLON DIKE, of Columbia, S. C.—*Improved Method of Adjusting the Rake of Reciprocating Saws*.—Patent dated October 23, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The movable head timber M, to which the top of the saw is connected by means of the guide O, said timber being provided with tenons which pass through openings in the frame pieces A A, and being adjusted by wedges or keys, substantially as and for the purpose specified.

No. 30,524.—ROBERT H. GRATZ and CHARLES C. LLOYD, of Philadelphia, Pa.—*Improvement in Dry Gas Meters*.—Patent dated October 23, 1860.—This invention consists in placing the inlet at the bottom of a dry gas meter, and in placing the outlet at the top of the meter; thus dispensing with side tubes.

Claim.—Placing the inlet A at the bottom of a dry gas meter, thereby producing simplicity in the attachment and permitting the liquid condensation to flow direct into the main, substantially as set forth.

No. 30,525.—GEORGE S. BOSWORTH, of Troy, N. Y.—*Improvement in Moulding Cast Iron Wheels*.—Patent dated October 30, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Forming a mould by means of a flask consisting of three parts, to wit: a cope, a nowel or drag and cheeks, or chill, the two former being open to ram up the sand to form the mould on face patterns which can be printed back, the mould being formed in the manner and by the means set forth, and the thickness and weight of the wheel being determined by the depth of the cheeks, which can be varied in the same sized wheel, and with the same pattern, and same cope and nowels.

No. 30,526.—ZERAH B. BROWN, of Simsbury, Ct.—*Improvement in Seeding Hoes*.—Patent dated October 30, 1860.—*d* is a box or receptacle for holding the seed, and is secured to the handle *b* of the hoe in a proper manner by the use of screws. In the lower end of said box is arranged a device for adjusting and dealing out the seed from the box *d* in the desired quantity; *e* is the sliding bar, nearly in the centre of which is fitted an elastic plate *f*.

Claim.—The seed box *d*, hoe handle *b*, and seed slide *e*; the latter being provided with the adjustable plate *f* and spring *k*, and arranged at right angles to said box and handle for operation conjointly, in the manner and for the purpose described.

No. 30,527.—WESLEY A. COE, of Greensborough, N. C.—*Improved Peach Parer*.—Patent dated October 30, 1860.—This invention consists in the peculiar arrangement of the two prongs of a peach paring and slicing machine and crank, in combination with a lever hinged at one end and hung to an oblique rack by a link; also in a curved and elastic slicing knife and curved guide rods, in combination with a reciprocating stirrup.

The inventor says: I *claim*, first, the peculiar arrangement of the two prongs A B of a peach paring and slicing machine and crank C, in combination with a lever F hinged at one end at I and hung to an oblique rack H by a link G; all constructed substantially as and for the purposes set forth.

Second. A curved and slicing knife P P¹ P, and curved guide rods R R¹ R R¹ R, in combination with a reciprocating stirrup M M¹ M, constructed and operating substantially as set forth.

No. 30,528.—HORACE COLLIER, of Smithville, Ark.—*Improved Machine for Delineating the Course of Rivers*.—Patent dated October 30, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A "plotter" rotating at a speed corresponding with that of the boat, or other object upon which it is carried, and marking upon a sheet which is held in position corresponding with the points of the compass, substantially as and for the purposes set forth.

No. 30,529.—J. A. COWDERY, of North Middletown, Ky., and G. W. COWDERY, of Great Bend, Ohio.—*Improvement in Straw Cutters*.—Patent dated October 30, 1860.—This invention

consists in the construction and arrangement of the cutting and feeding apparatus of a straw cutter.

The inventors say: We *claim*, first, the combination of the cam M, lever N, and fork O, constructed and arranged as described, for the purpose set forth.

Second. The combination of the lever V, with its spurs *c* and *d*, with the fork O, and spring pawls *s*, as and for the purpose set forth.

Third. The combination with the top W of the lever Y, and its spring *i*, arranged and operating as described

No. 30,530.—ELLIOT DICKERMAN, of Richmond, Vt.—*Improved Clothes Dryer*.—Patent dated October 30, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The employment in clothes dryers of the arms P and clothes lines K, in combination with the arms D and clothes lines J, and with suitable stops on D, substantially as specified

No. 30,531.—ROBERT B. DONALDSON, of Washington, D. C.—*Improved Door Spring*.—Patent dated October 30, 1860.—The lever C works between the casing plates A and B, and the inward movement of said lever is arrested by the central lug *i*. The ratchet wheel *h* upon the axle *a*, and the pawl *q*, which is pivotted to the inner surface of the lever C, retain the spring which actuates the said axle in any desired state of compression.

Claim.—The arrangement of the respective parts of said apparatus, which enables its actuating spring to exert its power upon a door through the medium of the axle *a*, the lever C, and the cord or chain *d*, substantially in the manner set forth.

No. 30,532.—HENRY EVANS, JR., of Baltimore, Md.—*Improved Machine for Bending Sheet Metal*.—Patent dated October 30, 1860.—The claim and engravings explain the nature of this invention

Claim.—A bed and hinged tongue provided with grooves or shoulders H for the bent edges of the tin, in combination with two levers hinged to said bed for bending the sheet of metal, as described

No. 30,533.—LEWIS EVANS, of Morgantown, Va.—*Improved Flask for Casting Packing around Cannon Balls*.—Patent dated October 30, 1860.—This invention consists in the means described, whereby two or more rings of soft metal packing are introduced into circumferential and longitudinal grooves of cast iron projectiles.

Claim.—The use of the flasks A B connected together by a vertical hinge, and having semi-cylindric shouldered recesses L L formed on their inner faces, in combination with cast iron projectiles, which have circumferential and longitudinal grooves J J J formed in them, and with or without the bar D and pins F F; all substantially as and for the purposes set forth.

No. 30,534.—WILLIAM HEPPENSTALL, of Springfield, Mass.—*Improvement in Skirts*.—Patent dated October 30, 1860.—This improvement consist in weaving into the selvage of the fabric a waistband, the warp threads of which are larger and stronger than the threads which compose the filling, and larger than the other warp threads of the fabric, for the purpose of drawing up the cloth to form the waistband and adapt it to the size of the wearer, together with weaving into the fabric openings for hoops, cords, or tape.

Claim.—As a new article of manufacture, a skirt, constructed substantially as described.

No. 30,535.—EUGENE MACK, of the United States Navy.—*Improved Machine for Stretching the Straps of Ships' Blocks*.—Patent dated October 30, 1860.—The inventor says: In carrying out my improvement I arrange on the fid A my strap B, and, by the arms or levers attached, turn the screw attached to the wedge C, until the graduated marks in the wedge coincide with a mark on the fid, which signifies that the strap is stretched to its proper size.

Claim.—The fid, wedge, screw, and gauges on the fid, when combined and arranged, substantially as and for the purpose specified.

No. 30,536.—JAMES W. LYON, of Brooklyn, N. Y.—*Improved Machine for Finishing Gas Fittings*.—Patent dated October 30, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, interposing between the jaws and body of the chuck spindles or joints, substantially as described, whereby the jaws may be turned on axes at right angles to the axis of the spindle and chuck, for the purpose of presenting different parts of the fitting, clamped between them to the action of the cutting tools, substantially in the manner and for the purposes described.

Second. In combination with the jaws of the chuck, the adjusting screws, substantially as described

Third. In combination with the jaws of the chuck, the mechanism whereby they are clamped and locked together on the fitting at one operation, to wit: the cams, levers, and rack-sliding bars, substantially as described.

Fourth. In combination with the cams operating the jaws of the chuck, a collar wrench not removable from the chuck and spindle, substantially as described.

Fifth. In combination with the jaws of the chuck, the indices and self-acting detents, substantially as described.

Sixth. In combination with the indices and detents, the locking cams or wedges, substantially as described, and when in connection with the chuck and jaws, substantially for the purposes set forth.

Seventh. The chuck constructed substantially as described, and containing the improvements separately specified in the first, second, third, fifth, and sixth claims.

Eighth. The combination of a friction brake directly with the chuck, substantially as described.

Ninth. The combination of the brake chuck and clutch shifter, or its equivalent, when so arranged as to communicate motion to the chuck spindle when the brake is released from the chuck, substantially as described.

Tenth. The sliding carriage and series of mandrels, in combination with the spindle and chuck, substantially as described.

Eleventh. The division plate, self-acting clamp, and releasing lever, in combination with the sliding carriage, substantially as described.

Twelfth. The latch bolts in the mandrel bearings, in combination with the mandrels, substantially as described.

Thirteenth. Constructing the sliding carriage mandrels in two parts, arranged and combined together, substantially as and for the purposes described.

Fourteenth. The combination of the adjustable drill with the adjustable facing tool constituting the cutting tool *k*, substantially as described.

Fifteenth. Alternating taps or dies with cutting tools, in combination with two or more pairs of parallel mandrels, arranged in combination with a chuck, substantially as described.

Sixteenth. The driver, in combination with the sliding carriage and mandrels, substantially as described.

Seventeenth. In combination with the driver and spindle through which it slides, the pulley, brake, and clutch shifter, substantially as described.

Eighteenth. In combination with the mandrel socket of the driver, the spring latch and releasing cam, substantially as described.

Nineteenth. The employment of an adjustable friction plate, in combination with the chuck and tap or die to hold the fitting against the action of the tap or die by a yielding pressure sufficient for the purpose of cutting the screw thread, but yielding to prevent stripping the thread or breaking the tap when requisite, substantially as described.

Twentieth. And finally, I claim combining together in one machine a series of parallel mandrels, carrying cutting tools, driver, sliding carriage, and chuck, substantially as described, and arranged so as to operate substantially in the manner and for the purposes set forth.

No 30,537.—EDWARD MAYNARD, of Washington, D. C.—*Improvement in Breech-Loading Fire Arms*.—Patent dated October 30, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim the employment of a solid-headed hinged cone seat *B*, for closing the lateral opening between the mouth of the chamber of the barrel and the solid head at the after end of said opening, when the proportions of the said cone seat and the lateral opening which receives the same are such that a thin-sided metallic cartridge, (either loaded or unloaded,) can be readily placed within the chamber of the barrel when the cone seat is in its open position, and then be securely retained in said chamber by throwing the cone seat into its closed position, substantially as set forth.

When the mouth of a chamber of a breech-loading fire arm is closed by the head of a hinged block *B*, which forms the cone seat of said arm, I also claim the placing of a thin-sided metallic cap within the said chamber, for the purpose of forming a tight joint between it and the said hinged block, substantially as set forth.

I also claim giving the bottom of the thin-sided chamber cup *f* of my improved fire arm, such a degree of thickness and strength that either a laterally projecting arm or a looped thong or cord may be combined therewith, of such a size and shape as shall enable the said cup to be readily withdrawn from the chamber of the barrel, substantially as set forth.

When the lateral opening between the mouth of the chamber of the barrel and the solid head at the after end of said opening is closed by a properly proportioned hinged cone seat, I also claim so proportioning the hinges of said cone seat that the recoil thereof, at the instant of firing the arm, will be wholly exerted against the solid head opposite the after end of said cone seat.

No. 30,538.—H. L. PIERCE, of Millport, N. Y.—*Improvement in Smut Machines*.—Patent

dated October 30, 1860.—R R are the scouring rods, F ff are the fans or blowers, s s s¹ the draught spouts, P the feed hopper, a the main shaft, and c c the inside cylinder.

Claim.—The adjustable metallic scouring rods R R R, fluted, notched, or grooved, in combination with the cylinder D, and cap M, constructed and operating substantially as described.

No. 30,539.—C. A. McEvoy, of Richmond, Va.—*Improved Sabre Bayonet Fastening.*—Patent dated October 30, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, fastening a sabre or other bayonet to the muzzle end of a rifle by a lock located in the rear of the handle of said bayonet, substantially as and for the purposes set forth.

Second The arrangement of a stationary and slotted plate F, movable and slotted disk L, and spring stop M, all located in the rear end of the handle of a bayonet, in combination with a T-shaped projection B C C, near the muzzle end of a rifle, substantially as and for the purposes set forth.

No. 30,540.—JOHN OUTRAM, of Elmira, N. Y.—*Improvement in Machines for Cleaning Grain.*—Patent dated October 30, 1860.—This invention consists in the form, construction, and operation of the machine.

The inventor says: I *claim*, first, the arrangement of blast and suction fans on a horizontal shaft, in connection with separating chamber F, and pipes E, D, and G, as described and shown.

Second. The movable double acting deflector i, in the pipe G, constructed and operating in the manner described and shown, for the purpose of dividing and directing the currents of air upwards and downwards.

No. 30,541.—JOHN PARSONS, of Cleveland, Ohio.—*Improvement in Brick Machines.*—Patent dated October 30, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, as my invention, first, the wheel B, fitted to the cams c c c, and studs d d d, in combination with lever G, rack e, hub f, friction wheel I, substantially as described and for the purposes set forth.

Second. The escape door, figure 3, with slide t, formed hollow at the back part, inclined planes x x, spring w, latch u, guide u*, substantially as described and for the purposes set forth.

Third. The arrangement of the parts of the driver 4, the plates 6, 7, and 8, the regulating screws and punch nuts in connection with the guide rods 15 15, guides 16 16, operated substantially as described for the purposes set forth.

Fourth. The arrangement of the bevel wheel y, and pinion wheel z, in combination with rollers m and m, band o, spring n, or its equivalent, the mould table l, and driver p, substantially as described and for the purposes set forth.

No. 30,542.—WILLIAM H. PECKHAM, of Hoboken, N. J.—*Improved Heel for Boots and Shoes.*—Patent dated October 30, 1860.—This invention consists of a hollow metallic heel, with a screw and nut, by which it is firmly connected to the boot or shoe sole, said heel being also formed with serrations, taking the leather to prevent the same from moving, and with a cavity at the front part of the heel to prevent injury by striking the pavement.

Claim.—The hollow metallic heel formed with the cavity b, and connected to the boot or shoe by the nut c, in the manner specified.

No. 30,543.—ROBERT PILSON, of Laurel, Md.—*Improvement in Machines for Dressing Warp.*—Patent dated October 30, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the sectional warp beams c d d², the racks or guides g² g², the distributing cylinders e e, and squeezing rollers ff, the brushes h h, the copper metal comb-like guide or rack K K, the copper metal harness m² m², the lease rods z z², the drying drums N O P, the loom beam T u, the smoothing controlling cylinder X, and fan Y, when so arranged relative to each other, as shown, forming one individual machine, and through all of which intermediate auxiliary cones and cog gearing are dispensed with, and all undue drag, strain, and tension of the threads of the warp are prevented, and the several improved results in the manufacture of cotton fabrics are attained, substantially as set forth and described.

No. 30,544.—JAMES M. PITTS, of Sumter, S. C.—*Improvement in Fences.*—Patent dated October 30, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination and arrangement of the long and short battens and braces with the semi-dovetails, which are formed in reverse positions on the upper and lower rails of the panels, substantially as and for the purposes set forth.

No. 30,545.—EUGENE M. ROXFORD, of Indianapolis, Ind.—*Improvement in the Manufacture of Square Pans of Sheet Metal*.—Patent dated October 30, 1860.—The claim and engravings explain the nature of this invention.

Claim.—An adjustable arrangement of plates C and D, for raising and folding the metal overlapping them, which at the same time compress the slack in the corners, and in connection with plate H, bends the compressed slack against the sides, the whole constructed and operating as set forth.

No. 30,546.—WILLIAM H. RACEY, of St. Augustine, Fla.—*Improvement in Lamps*.—Patent dated October 30, 1860.—This invention consists in the employment or use of perforated plates placed within the cone or cap, and in such relation therewith as to control the action of the air upon the flame within the said cap or cone, and render the lower part of the flame merely a gas generator, the gaseous vapor passing up between the plates and uniting with the oxygen within and at the apex of the cone.

Claim.—The employment, or use, of the perforated plates F F, placed in relation with the cap C, wick tube E, and inner deflector D, to operate as and for the purposes set forth.

No. 30,547.—DANIEL R. PRATT, of Worcester, Mass.—*Improvement in Bearings for Railroad Cars*.—Patent dated October 30, 1860.—This invention consists in constructing and arranging the bearings.

The inventor says: I *claim*, first, the employment of the enclosed circular plates E E¹, or the quadrantal boxes F F¹, constructed and used as and for the purpose specified.

Second. In combination with the enclosed plates and boxes, I claim the balls and rollers I and L, as and for the purpose specified.

Third. The use of the division plate *d*, in the manner and for the purpose specified.

No. 30,548.—SILAS STEVENS, of Worcester, Mass.—*Improved Tool Holder*.—Patent dated October 30, 1860.—The object of this invention is to economize in the material used in the construction of turning and planing tools, and also to facilitate the construction of the same as well as keeping them in proper working order.

Claim.—The arrangement of the adjustable head *c*, tool D, and rod R, with the hollow bar A, screw *f*, and nut E, as and for the purpose shown and described.

No. 30,549.—WILLIAM WATTS, of Newark, N. J.—*Improvement in Hangers and Boxes for Shafting*.—Patent dated October 30, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A box adjusted and supported in an open bottomed hanger, (said hanger having the flanges *c c*,) by means of the bolts *g g*, the bolt E, and sliding caps *f f*, substantially in the manner and for the purpose described.

No. 30,550.—HENRY E. WOODFORD, of Watertown, N. Y.—*Improvement in Valves for Steam Engines*.—Patent dated October 30, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The employment of valves C that have an increasing radius from one end to the other, and that are adjustable with their axis of motion, in combination with cylinder A and chest B, when said valves are constructed and arranged to operate in the manner substantially as shown and described.

No. 30,551.—JOSEF JOHNSON, of New York, N. Y., assignor to himself and JOHN WARD, JR., of Brooklyn, N. Y.—*Improved Clothes Dryer*.—Patent dated October 30, 1860.—This invention is a new article of manufacture, consisting of two series of arms, each supporting several series of clothes lines hinged to each other and to connecting blocks, and provided with a tension cord, or its equivalent.

Claim.—The arrangement of the blocks A B, arms C D, and joints *e*, lines G H, and tension cord J, in the manner substantially as described, so as to produce the effects set forth.

No. 30,552.—C. W. SHEDD, of Addison, Ala., assignor to himself and ROBERT JAMISON, JR., of Tuscaloosa, Ala.—*Improvement in Grinding Mills*.—Patent dated October 30, 1860.—This invention relates to an improved mill of that class which is designed for grinding corn and cobs in the husk.

The inventor says: I *claim*, first, the arrangement of the plate J, tubes M, tube K, sleeve L, provided with nut *r*, and cutter disk H, essentially as and for the purpose set forth.

Second. The notches *o o* in the cutter disk H, when used in connection with the cutters *ll*, and the plates J, provided with the tubes M, for the purpose specified.

No. 30,553.—SIDNEY S. TURNER, of Westboro, Mass., assignor to himself and OTIS F.

VINTON, of said Westboro.—*Improved Machine for Splitting Leather.*—Patent dated October 30, 1860.—The rotary cutter or circular knife C is fixed on one end of a horizontal shaft e, that is sustained in balls f f, and bears a pulley g, about which and a driving pulley h, an endless belt i works; this wheel h is carried by a driving shaft l, and bears against a periphery of a wheel m, fixed on the shaft D.

Claim.—The improved welt-splitting machine, as constructed, with a rotary circular knife, the shaft e thereof, and conical feed rollers, arranged with respect to each other, and so as to operate therewith, substantially as specified.

No. 30,554.—SIDNEY S. HOGH, of Cuyahoga, Ohio.—*Improvement in Rotary Harrows.*—Patent dated October 30, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Combining two or more harrow-toothed wheels, or frames, with a draught frame, or with a draught beam in such a manner to cause the forward movement of said draught frame, or beam, to impart positive rotary movements to the said harrow-toothed wheels, or frames, substantially as set forth.

No. 30,555.—FEDERAL C. ADAMS and JOSEPH PECKOVER, of Cincinnati, Ohio.—*Improved Hinge.*—Patent dated November 6, 1860.—This invention consists in casting a recess in one piece and a projection upon the other piece, the recess being enough larger than the projection that is to lie and turn in it, that molten zinc or other suitable metal may be poured into it and surround the projection, and closely and neatly fill up the depression.

Claim.—Forming a hinge by the combined use of the large cut under recess on one part, and the projection b c d, or its equivalent, on the other part, and the molten zinc, or other easily fused metal, run in between them, substantially as and for the purpose set forth.

No. 30,556.—CHARLES E. ATHERTON, of Paterson, N. J.—*Improvement in Vapor Lamps.*—Patent dated November 6, 1860.—The heat from the flame acting upon the receiver A A, made of cast iron, causes the wire a a, made of soft brass, to expand, which, acting upon one end of the lever b, forces the bevelled end of the lifting pin c into the horizontal hole g of the valve e e e, thereby raising the valve and admitting the gas generated in the tube K into the receiver, and from thence through the burning tubes i i to the burner.

Claim.—The combination and arrangement of the gas receiver, the self-acting valve or gauge at the top of the generating tube, with the use of the metal rod and bevelled pin, substantially as and for the purpose set forth.

No. 30,557.—MINER H. BACON, of Mystic, Conn.—*Improvement in Machines for Dressing Stone.*—Patent dated November 6, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement of the vibrating frame G with the lever M and the spring K, for increasing the force of the blows at pleasure, beyond that due to gravity alone.

Second. The employment of the checking spring J, in combination with the vibrating frame G and lever M, or their equivalents, substantially as described, for diminishing the force of the blows at pleasure, below that due to gravity.

Third. The arrangement of the recess r in the vibrating frame G, the stop R on the sliding frame C, and of the gearing H and O, substantially as and for the purpose set forth.

Fourth. The employment of the sleeves T, operated by the screws U, or their equivalents, for adjusting the height of the cutters S in the cutter frame F, in combination with the means for adjusting the inclination of the several cutters S, in their respective sleeves T, substantially as set forth.

No. 30,558.—WILLIAM B. BARNES, of Forestville, Conn.—*Improvement in Clocks.*—Patent dated November 6, 1860.—This improvement in clocks relates to the manner of constructing and arranging all, or nearly all, of old parts, in a new manner and in a close, compact form, having three pointers to indicate time for a pendulum clock.

The inventor says: I *claim* the arrangement of the verge g, detent k, triangular shaped escape wheel tooth o, in combination with a pendulum n, substantially as and for the purpose described.

I *claim*, in combination with the arrangement above described, the arrangement of the pointer spindles and gearing attached thereto, substantially as and for the purpose described.

No. 30,559.—JOHN BEAUMONT, of Hartford, Conn.—*Improvement in Coffee Pots.*—Patent dated November 6, 1860.—This invention consists in providing a tea or coffee receptacle, with a riddled bottom, upon which to place the tea or coffee, and a perforated cover laid over the tea or coffee.

Claim.—The arrangement, in the manner and for the purpose specified, of the coffee pot a,

provided with the liquid joint *f*, the receptacle *b*, having the perforated bottom *c* and perforated cover *e*, and the condenser *d*, provided with the cavity *i*.

No. 30,560.—N. BRITTAN, of Lockport, N. Y.—*Improvement in Lightning Rods*.—Patent dated November 6, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The construction of lightning conductors, with parallel continuous strips or tubes of metal held at a distance apart and united by intervening washers or blocks, substantially in the manner and for the purposes specified.

No. 30,561.—M. A. BUTLER, of Mariana, Fla.—*Improvement in Compositions for Soap*.—Patent dated November 6, 1860.—This invention consists in a compound of white soap, known as "opedeldoc soap," and commonly used by druggists for liniments, and of a small quantity of salt water soap, such as is used by sea-going persons, mixed with spirits of ammonia, in a certain proportion, and colored, if desired, so as to produce a soap that has the appearance of ordinary or fancy soap, and which can be used in water containing mineral or metallic substances without inconvenience.

Claim.—The described soap, composed of the ingredients specified, and mixed together in about the proportion described, for the purposes set forth.

No. 30,562.—CHARLES F. CHAMBERS, of Chambersburg, Ind.—*Improved Washing Machine*.—Patent dated November 6, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of upper rubber D, adapted to reciprocate on stationary ways C, and the swinging lower rubber or board F, adapted to be elevated from the tub, and to hold the clothes stationary for the upper rubber to act upon, or to be depressed at will, as and for the objects set forth.

No. 30,563.—ALBERT B. COLTON, of Athens, Ga.—*Improved Spike for Threshing Machines*.—Patent dated November 6, 1860.—This invention consists in the employment of reversible spikes, having a hole through their centre, in combination with flanged plates or rings, having diagonally set rollers and the longitudinal screw rods.

Claim.—The combination of reversible spike A A s, flanged and shouldered plates or rings C a g h d, and screw bolts B, substantially in the manner and for the purposes described.

No. 30,564.—JAMES DAVIES, of Schuylkill Haven, Pa.—*Improvement in Canal and River Locks*.—Patent dated November 6, 1860.—The claim and engravings explain the nature of this invention.

Claim.—In combination with a lock chamber, a passage or passages through which the water may flow back into the upper level, when a boat enters the lock from above, and through which water may flow into the chamber from the level below, when the boat is leaving the lock, substantially in the manner and for the purpose set forth.

No. 30,565.—SARAH N. DAVIS, of Muskegon, Mich.—*Improved Clothes Sprinkler*.—Patent dated November 6, 1860.—This invention consists in combining, with a cylindrical bellows, small enough to be conveniently used with one hand, a syphon-shaped tube and a small barrel with a hole in one end, which hole is stopped by a simple valve when a pressure is put upon the bellows, the end of which barrel is finely perforated around the central hole, for allowing water to issue from the barrel in fine jets of spray.

Claim.—The combination, with a suitable bellows, of the syphon tube C and the barrel G, with its perforated end orifice *b*, and valve H, arranged and operating as and for the purposes set forth.

No. 30,566.—JOHN DAVIS, of Elmira, N. Y.—*Improvement in Apparatus for Detaching Horses from Carriages*.—Patent dated November 6, 1860.—This invention consists in providing an apparatus for easily and instantly detaching a horse from a vehicle.

Claim.—The arrangement of the whiffle tree, as constructed, with the thills, provided with the hooks H H and springs I I, substantially as and for the purpose specified.

No. 30,567.—A. K. EATON, of New York, N. Y.—*Improved Gold Amalgamator*.—Patent dated November 6, 1860.—This invention consists in the construction and working of a gold amalgamator, so as to secure the minute particles that are usually carried away in suspension.

The inventor says: I claim, first, the use of an inferior amalgamated surface, substantially as specified, in contact with the superior surface of a body of mercury.

Second. I claim the combination of the rotary disk, with the hollow shaft and receiving bowl, substantially as described.

No. 30,568.—MOSES W. DILLINGHAM, of Charlestown, Mass.—*Improvement in Vapor Lamps*.—Patent dated November 6, 1860.—The claim and engravings explain the nature of these improvements.

The inventor says: I *claim* the application of the valve O and cup E to the wick tube, in such manner as to enable both valve and cup to turn together on the wick tube, and with respect to the lateral, discharging orifice thereof as described.

Also, the arrangement and combination of the cup or thimble E, the gas heater C, the wick tube A, and its burner, the whole being as specified.

Also, the arrangement of the conduits or passages leading from the wick tube through the cap B, the heater C, and into the burner D, as described.

Also, the arrangement of the jet holes *ff*, of the slit *e*, of the burner, viz: at the termini of such slit, as and for the purpose described.

No. 30,569.—MOSES DEPUY, of Pittsburgh, Pa.—*Improvement in Making Hoes*.—Patent dated November 6, 1860.—This invention consists in attaching the shank or tang and eye of the hoe to a blade.

Claim.—The combining and fastening of a steel or iron blade and a malleable wrought or cast iron tang A, by means of the groove or furrow *b* and the flanges *c* and *e*, and the rivet *k*, substantially in the manner set forth and described.

No. 30,570.—SYLVENDER ELLIS, of New Britain, Conn.—*Improvement in Washing Machines*.—Patent dated November 6, 1860.—This invention consists in the combination of a perforated, toothed, or corrugated plate, fitted to and turning upon a fixed shaft or spindle, secured in the bottom of a tub, and having a toothed or corrugated revolving conical cylinder, the shaft of which is secured in boxes, one on the centre shaft of the tub, and the other on a shaft secured on the side of the tub.

Claim.—The combination of the conical cylinder *g*, with the revolving plate *d* arranged within a tub *a*, having the adjustable features described, arranged and operating together for the purpose specified.

No. 30,571.—JACOB FRICK, of Philadelphia, Penn.—*Improved Shutter Fastener*.—Patent dated November 6, 1860.—This invention consists of a turn buckle or bar, having a spring with a projection, in combination with certain plates, one of which has recesses for receiving the projection of the spring, and projections for limiting the movement of the bar.

Claim.—The bar F, and the spring *d*, with its projection *e*, in combination with the plates C and D, the latter having the recesses *h* and *f*, and the projections *i* and *j*, or their equivalents, and the whole being arranged and applied to the shutters as and for the purpose set forth.

No. 30,572.—FRANKLIN GETZ, of Amherst, N. Y.—*Improvement in Driver's Seats for Mowing and Reaping Machines*.—Patent dated November 6, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, suspending the seat board E, from the spring F, by means of the swivel strap G, and rod G¹, the seat board having a free movement upon the bolt j¹, so as to allow of a lateral swinging movement of the seat board, for the purpose and substantially as described.

Second. I claim the post M, in combination with the "Kirby machine," for the purpose of supporting the rear end of the seat board, in order to locate the driver's seat in front for reaping, substantially as described.

No. 30,573.—A. I. HARDIN, of Shelby, N. C.—*Improvement in Machines for Cleaning Cotton Seed*.—Patent dated November 6, 1860.—This invention consists in constructing and arranging the different parts.

The inventor says: I *claim*, first, the arrangement of the cylinder E, provided with arms or pins *d d*, with the cylinder C, composed of a series of square bars *c c c*, placed in the position represented, and with the external gauze casing D, the same being used and operating in the manner and for the purpose specified.

Second. In combination with the subject of the first claim, I claim the inclined plane J, spout L, and revolving screen I, when used as and for the purpose specified.

No. 30,574.—GEORGE C. HINMAN, of Portageville, N. Y.—*Improvement in the Seats of Water Closets*.—Patent dated November 6, 1860.—This invention relates to the application and use of a movable seat for water closets, which is brought into place and used when needed, but which is to be removed or elevated from the stationary seat automatically when a person rises from it.

Claim.—The combination of the cord C, pulley D, and weight E, with the seat B, for the purpose of making the seat B self-elevating, substantially as described.

No. 30,575.—J. MORRISON HUNTER, of New York, N. Y.—*Improvement in Apparatus for Trying Oils*—Patent dated November 6, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the described arrangement and combination of the press and boiler, the former being placed within the latter, for the purpose of rendering oils or other fatty matters, by thoroughly pressing the scraps while the same are exposed to the boiler heat or steam heat, substantially in the manner and for the purposes described.

Second. I claim the use of the crib for preventing the scraps from coming in contact with the boiler, substantially in the manner described.

Third. I claim the employment of the pressure heads, and right and left hand screws, by means of which the oil may be separated from the scraps, substantially in the manner described.

No. 30,576.—WARREN IDDINGS, of Warren, Ohio.—*Improvement in Embalming Dead Bodies*.—Patent dated November 6, 1860.—This mode of embalming human bodies after death embraces both external treatment and the injection of substances into the blood vessels.

Claim.—The described process or mode of embalming the same, consisting of the three steps combined, the different compositions of matter being employed substantially in the manner and for the purposes set forth.

No. 30,577.—JONATHAN L. JONES, of St. Louis, Mo.—*Improvement in Truss Bridges*.—Patent dated November 6, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the flexile curved splice in the lower chord, when said splice is formed of broad flat plates $c\ c^1\ b^1\ b^2$, with lateral curved offsets or lugs $c^3\ b^3$, formed on their ends, said offsets pulling against one another and allowing a free independent movement of each plate in the path of a vertical circle, substantially as set forth.

Second. The combination of the convex or arched surface of blocks $d\ k\ s\ e\ d^1\ e^1\ x^1$, with similarly convex or concave flanges t , at the ends of the tubular braces o and z , substantially as and for the purposes set forth.

Third. The metallic clamps or recessed blocks $d\ e\ d^1\ e^1$, for retaining and holding together the tension joints of the upper and lower chords or stringers, in the manner and for the purposes set forth.

Fourth. The grooved shoe W , which connects and ties the lower chords and floor beams together, substantially as and for the purposes set forth.

Fifth. The septum or longitudinal partition 2 , and transverse tubes p , combined within the bore of the tubular brace o , in the manner and for the purposes set forth.

Sixth. The shoe j , as constructed and combined with the lower end of the tubular diagonal brace and the extreme end $a\ a$, of the lower chords, substantially as and for the purposes set forth.

No. 30,578.—HENRY JOHNSON, of Washington, D. C.—*Improvement in Vapor Burners*.—Patent dated November 6, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* so placing the reservoir or fountain in relation to the burner that the lowest point of the fluid shall be at or about the level of the burner, and the highest point below the level of the top of the generator or gas pipes $b\ c$, in the manner and for the purposes set forth.

I claim covering the upper ends of the gas pipes b and c , by the screw cap e^1 , constructed as set forth, so as to embrace the open ends of these pipes in one open common cavity in the cap and screw over them, in the manner set forth.

I claim the elevated conductor $n\ n^1$, rising above the highest level of the fluid in the fountain, as set forth.

No. 30,579.—WILLIAM KEARNEY, of Union, N. J.—*Improvement in Wrenches*.—Patent dated November 6, 1860.—This invention consists in giving facility and certainty to the operation of the wrench, by means of a jaw of a peculiar construction and arrangement.

Claim.—The jointed jaw $C\ D$, with its rule joint foot, when combined with the spring E , and the inclined plane f , and constructed substantially in the manner and for the purpose set forth.

No. 30,580.—WILLIAM S. KIRKHAM, of Brantford, Conn.—*Improvement in Locks*.—Patent dated November 6, 1860.—The object of this invention is to obtain an equal action of the knob hub upon the slide of a lock, when the knob is turned in either direction, and it consists in the use of a yoke, lever, spring, and slide.

Claim.—The arrangement of the sliding yoke F , lever G , spring H , and slide or latch C , essentially as and for the purpose set forth.

No. 30,581.—WILLIAM S. KIRKHAM, of Brantford, Conn.—*Improved Blind Fastener*.—Patent dated November 6, 1860.—The object of this invention is to facilitate the application of the fastening to a shutter or blind, provision being made for its adaptation to the varying thickness of shutters and blinds, as also to insure a firm and durable connection of the fastening thereto.

Claim.—The tube or socket B having the bar D and spring *f* secured within it, and provided with the tapped flanches *c c*, in connection with the plate C provided with lugs or projections *e* and screws *d*, all being arranged essentially as and for the purpose set forth.

No. 30,582.—JOHN LEWIS, of Elizabeth, N. J.—*Improvement in Attaching Sails to Ships' Yards*.—Patent dated November 6, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the clamps *c c*, fitted and acting substantially as set forth, to retain the sail to the yard or spar, or allow of its being disconnected, as specified.

Second I claim the ear ring formed of the chain *f*, fork *h*, and screw *m*, to firmly clamp or grasp the yard or spar, regardless of the size, as set forth.

Third. I claim the hasp *f f*¹, in combination with the ear ring, in the manner and for the purposes specified.

No. 30,583.—LEVI LORING, of Saco, Me.—*Improved Milking Stool*.—Patent dated November 6, 1860.—This invention consists in attaching to a milking stool, of the ordinary construction, a platform or stand, on which the pail is to rest during the process of milking, which platform or stand is made to open for the reception of the pail, and is closed by a spring.

Claim.—The application to a milking stool of the platform or stand provided with a spring for fastening when closed, constructed as described and for the purpose specified.

No. 30,584.—WILLIAM H. LIVINGSTON, of New York, N. Y.—*Improved Device for Sustaining Trees*.—Patent dated November 6, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the segmental tree supporter *b*, constructed and operating substantially as specified.

I also claim the hook *e*, formed with the loop 3, by which said hook, and the wire or brace connected thereto, may be lifted upon or off a limb or branch, for the purposes and as set forth.

No. 30,585.—WALTER W. PADDOCK, of Cincinnati, Ohio.—*Improvement in Sealing Preserve Cans*.—Patent dated November 6, 1860.—This invention relates particularly to a combination of automatic valve and permanent sealing device.

Claim.—The combination of the automatic valve C, exhaust chamber D, and permanent sealing cup E, constructed and arranged to operate substantially as and for the purposes set forth.

No. 30,586.—J. EDWARD PARKER, of West Meriden, Conn.—*Improved Door Lock*.—Patent dated November 6, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The described mode of constructing a reversible door lock—that is to say, by so making the head of the latch bolt in a separate piece, and connecting it with the follower, that the said head may be taken out and reversed at pleasure, without disturbing any of the other parts, substantially as set forth.

No. 30,587.—HENRY PENNIE, of Buffalo, N. Y.—*Improved Stop Hinge*.—Patent dated November 6, 1860.—This invention consists in the combination of a compound hinge for carriage and other doors with an ordinary hinge, thereby constituting a stop hinge which prevents the door from being opened beyond a certain angle.

Claim.—The combination of the compound hinge J with an ordinary hinge D, both being arranged and operating substantially in the manner and for the purpose set forth.

No. 30,588.—J. M. PITTS, of Sumter, S. C.—*Improvement in Apparatus for Fractured Limbs*.—Patent dated November 6, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* one or two pair of staples secured to the bed frame—one pair at the sides of the mattress, and the other pair at the sides of the head pillow—in combination with straps and a shoe or gaiter, or its equivalent, fastened to an adjustable foot board, and with bandages for securing the upper part of the patient's body to the said staples, substantially as set forth.

Second. In combination with the staples, straps, shoe, and bandages, making the mattress

of a bed for the treatment of invalids in four parts, when the two central parts are secured to two slides, movable in lateral ways in the bed frame and over an evacuation aperture, substantially as and for the purpose set forth

No. 30,589.—HENRY H. ROBERTSON and CYRUS G. CARR, of Kingston, Mo.—*Improvement in Cultivators*.—Patent dated November 6, 1860.—The machine represented in the engraving is a cultivator with the shears G G in front, and two C C behind.

Claim.—The arrangement for united operation, in a cultivator, of two or more ploughs G, or scrapers N, a series of cross bars L L¹, a series of adjustable buttons J, perforated loops E, and stop pins I, substantially in the manner and for the purposes described

No. 30,590.—JOSEPH ROLLS, of New York, N. Y.—*Improved Carpet Duster*.—Patent dated November 6, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the beaters A A¹, brushes C C¹, and take-up roller F, substantially as described, so that, while the carpet is drawn through between the beaters and the brushes, both sides of the same are first exposed to the action of the beaters, and afterwards to the action of the brushes, and a thorough dusting of the carpet is effected.

No. 30,591.—JOHN G. ROSS, of New York, N. Y.—*Improved Arrangement of Gates for Directing the Flow of Water upon Tide Wheels*.—Patent dated November 6, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the gates b d d¹, for directing the flow of water, in combination with the swinging gates h h and i i, for regulating the filling or emptying of the pond, and with the gates f f¹ to regulate the supply to the wheel, in the manner and for the purpose specified.

No. 30,592.—CHARLES A. SHAW, of Biddeford, Me.—*Improved Pie Crimper*.—Patent dated November 6, 1860.—The claim and engravings show the nature of this invention.

Claim.—The knife and wheel, when combined, to crimp and trim a pie at one operation, constructed substantially in the manner set forth and specified.

No. 30,593.—LOUIS SIMONET, of New York, N. Y.—*Improvement in Water Proof Fabrics*.—Patent dated November 6, 1860.—The varnish used in manufacturing this cloth is composed of the following ingredients: Raw linseed oil, two thirds of a pound; boiled linseed oil, one third of a pound; ground plaster of Paris, one pound and a half; alcohol, one sixth of a gallon; brown shellac, one eighth of a pound; bone black, one sixth of a pound. These substances form a varnish.

Claim.—The varnished water proof cloth, as described.

No. 30,594.—THOMAS SLAIGHT, of Newark, N. J.—*Improvement in Door Latches*.—Patent dated November 6, 1860.—The object of this invention is to facilitate the operation of the slide so that the same may, when its outer end comes in contact with the nosing on shutting the door, be readily forced back into its case; due provision being also made for the shrinking of the door and jamb, so that all play of the former will be avoided in consequence of any shrinking of the parts aforesaid.

The inventor says: I claim, first, the segment F attached to the end piece d of the case A, and connected to the slide B, essentially as and for the purpose set forth.

Second. Having the end a of the slide B fitted in the segment F, so as to prevent any play of the latch consequent on a shrinking of the door or jamb, as described.

No. 30,595.—WILLIAM G. SMITH, of Elizabethport, N. J.—*Improvement in the Cutting Apparatus of Harvesters*.—Patent dated November 6, 1860.—This invention consists in the employment of a cutter bar which has a slot horizontal from the back to the front edge, in combination with dovetailed ends to the cutter sections and adjustable securing shoe pieces, and a triangular wedge.

Claim.—The slotted bar B and adjustable securing block C, in combination with the securing wedge or key D, and the removable sections A, with the tail pieces a, the whole constructed and operating substantially as described, for the purpose set forth

No. 30,596.—GEORGE D. TRUMPORE, of Newark, N. J.—*Improved Clothes Squeezer*.—Patent dated November 6, 1860.—The operation of this machine is as follows: The straps F F being thrown back into the position shown in the engravings, the screw H and cross bar D are removed, and the disk K is lifted out by means of the handle m. The wet clothes are then placed into the tub E, upon which is then placed the disk K; the cross D and screw H are

then placed on E, and the straps F F with rod *n* adjusted. The pressure is then applied by means of a screw, and the water effectually pressed from the clothes.

Claim.—The arrangement of the tub B, platform C, press tub E, perforated in its circumference with holes, movable bar D, screw H, plunger K, straps F F, elbow rods *r r* and *n*, and elbow screw *p*, when used as and for the purposes specified.

No. 30,597.—T. H. WILLSON and D. T. WILLSON, of Harrisburg, Pa.—*Improvement in Machines for Cutting Hay, &c.*—Patent dated November 6, 1860.—The claim and engravings show the nature of these improvements.

The inventors say: We *claim*, first, casting a cutter head composed of two sets of radial arms united by a sleeve, all in one piece, and around a wrought iron axle, substantially as described, for the purpose set forth.

Second. The combination of the cutter head with adjustable knees, when arranged on the face of both sets of arms, substantially as described, for the purpose set forth.

Third. Constructing the lower feed roller with transverse and longitudinal ribs upon its surface, for the purpose set forth.

Fourth. Attaching the stud carrying the intermediate pinion K to the side plate G, substantially in the manner described, for the purpose set forth.

Fifth. Constructing the guides of the feed roller shaft with a curved slot, as described, in connection with the stud plate, arranged as described.

Sixth. Arranging the intermediate double pinion *q* on an adjustable stud, and supporting said stud by means of a radius bar W, pivotted to the shaft of the feed roller, substantially as described, for the purpose set forth.

Seventh. The combination of the slotted stud plate with the double pinion, arranged as described, for the purpose set forth.

No. 30,598.—JESSE S. WHEAT, of Wheeling, Va.—*Improvement in Apparatus for Tanning* Patent dated November 6, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the relative arrangement of the suction pipes A A¹, force pumps C, supply pipes D D¹, communication pipes D² D³ D⁴ F F¹ F² F³, exit pipes D⁵ D⁶ D⁷ D⁸ D⁹ D¹⁰, and emptying pipes G G¹ G² G³ G⁴, in combination with reservoirs E E¹ E² E³ E⁴, E⁵, vats X¹ X² X³ X⁴ and weighted valve T¹, for the double purpose of effecting a complete circulation of the tanning liquid and pressure upon the hides through all the vats, and allowing any of the vats to be shut off from the circulation going on through the other vats, and to be emptied if desired, substantially as set forth.

Second. The frames H, in the vats, in combination with two eccentrics I I and connecting rods L L¹ L² L³ L⁴ L⁵, so arranged that all of the frames may vibrate simultaneously, or any one of them remain at rest, if desired, while the others vibrate, substantially as set forth.

No. 30,599.—DAVID C. WILKINSON, of Sidney, Ohio.—*Improved Flood Fence.*—Patent dated November 6, 1860.—This invention consists in a construction of worm fences with interlocking panels supported securely at top without the use of stakes, braces, or high posts, either rigid or pivotted, and so hinged to ground posts as to yield readily to the current.

Claim.—The combination of the alternate zigzag panels B C and B¹, gudgeons E, oblong bearings F, and cylindrical bearings F¹, the said parts being so constructed and arranged as to operate in connection, substantially in the manner and for the purposes set forth.

No. 30,600.—DAVID WADSWORTH, JR., of Nashua, N. H.—*Improved Gate Hinge.*—Patent dated November 6, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the described combination and arrangement of the fastening plates A B, the cam C, the stud D, the rod E, and the spring G, the whole constituting an improved gate hinge, as explained.

I also claim the combination and arrangement of the groove F with the said fastening plates, the cam, stud, rod, and spring applied and made to operate together, substantially as specified.

No. 30,601.—L. B. WRIGHT, of New York, N. Y.—*Improvement in Spinal Braces.*—Patent dated November 6, 1860.—In using this brace the lower spring clasp A is fastened to the top of the pelvis and rests on the crest of the ilium; the other, B, is fastened around the chest immediately beneath the arms. The head rest, which consists of the upright piece E, spring clasp F, and strap O, having been adjusted, the clasp F passes around the back portion of the head of the wearer and the strap rests upon the forehead.

The inventor says: I *claim*, first, the combination of the spring clasps A and B with the head rest, composed of the parts E F and O, when the same shall be combined and operated as set forth, and for the purpose specified.

Second. In combination with the same, the plates Q and R, arranged and operated as set forth and for the purpose described.

No. 30,602.—JOHN ADAMS, of Dalston, England, assignor to THOMAS POULTNEY, of Baltimore, Md.—*Improvement in Revolver Fire-Arms*.—Patent dated November 6, 1860; patented in England November 7, 1857.—This invention relates to revolver fire-arms of that kind whose chambers are in a cylinder rotating on an axis parallel to the bore of a fixed barrel.

The inventor says: I *claim*, first, the construction of the body of a revolver of two pieces of the form described, fitted and secured together substantially as specified.

Second. The link L, constructed and applied in combination with the trigger, and operating in combination with the notch *o* of the hammer, substantially as set forth.

Third. In combination with the link L, applied as described, I claim the arrangement of the cocking dog and the sear, substantially as described.

No. 30,603.—BENJAMIN DOUGLAS, of Middletown, Conn., assignor to W. and B. DOUGLAS, of the same place.—*Improvement in Pumps*.—Patent dated November 6, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The use of tube *a a*, for encasing the piston rod and preventing the escape of air through the stuffing box around the piston rod, when it also controls the upward movement of the check valve, substantially as set forth.

No. 30,604.—DYER GREENE, of Boston, Mass., assignor to himself and JOHN H. W. PAGE, of said Boston.—*Improvement in Rice Hullers*.—Patent dated November 6, 1860.—The principal parts of this mill consist of a screw and a mortar, the former being made to revolve within the latter. In these respects the machine is not new, it consisting in an improved arrangement of the screw, its shaft, and the pivot and step of the latter with respect to the bottom and the discharging valve or valves of the mortar.

Claim.—My improved arrangement of the screw C, the shaft B, and the pivot and step D of the latter with respect to the bottom *a* and the discharging valve or valves F of the mortar.

No. 30,605.—THOMAS KING, of Troy, N. Y., assignor to IRA A. PULSIPHER, of said Troy.—*Improvement in Machines for Moulding Candles*.—Patent dated November 6, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the piston-like tip moulds D, made movable unequal distances on the sliding frame F, and provided with the springs *v*, or their equivalents, substantially as and for the purpose described.

Second. The clamp or clamps G, or any equivalent therefor, applied to the projecting portion of the partly expelled candles, and elevated by means of a hoisting apparatus combined with the stand of moulds, for the purpose of drawing the candles out of the moulds, substantially as described.

Third. The combination and arrangement of the movable arms M, on the tip mould frame E, with the seats *k* and guides *l*, on the stand of moulds, and the seats *m*, on the sliding frames H H¹, as and for the purpose set forth.

Fourth. The wick holders P, constructed and arranged upon the stand of moulds, in the manner described.

No. 30,606.—LEWIS LAYMAN, of Westfield, N. Y., assignor to E. P. WHITNEY, of said Westfield.—*Improvement in Locks*.—Patent dated November 6, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The employment or use of a hub E, provided with four arms *f*, projecting in pairs from opposite sides of it, in connection with a reversible slide C, having the prongs of its yoke or fork provided with heads or cross pieces *e e*, the hub being applied to the yoke, and all arranged essentially as and for the purpose set forth.

No. 30,607.—SAMUEL P. PATTEN, of New York, N. Y., assignor to himself and S. A. NICKERSON, of Brooklyn, N. Y.—*Improvement in Capstan Windlasses*.—Patent dated November 6, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Combining the capstan with the barrel of the windlass by means of a worm wheel F on the said barrel and an endless screw L on the shaft G, which has the capstan barrel J and pawl rim I fitted to it, substantially as described, the so fitted pawl rim being furnished with one or more movable stops K to permit the operation of either of the modes specified.

No. 30,608.—ELLIOT ANDRUS, of Geneva, N. Y.—*Improvement in Apparatus for Drawing Water from Wells*.—Patent dated November 13, 1860.—This invention consists in providing

a bucket for raising water, the diameter of whose base is greater than the top, with a detach-ment bottom so constructed that it may be kept in its place by means of a spring; also a curb or case, to be placed over the mouth of the well or other place from which the fluid is to be drawn or elevated, with a diaphragm or division, so constructed that when the bucket is drawn up through the opening in this diaphragm the projecting flange on the movable bottom of the bucket will be caught by the diaphragm and held while the body of the bucket is drawn up from the bottom, and thus an aperture or opening is made, through which the fluid will be discharged from the bucket upon the upper side of the diaphragm and through a spout into a pail or other vessel.

Claim.—The arrangement and combination of the several parts, for the purpose, and to accomplish the result, as specified, of employing a bucket.

No. 30,609.—S. F. ATHERTON, of Fitchburg, Mass.—*Improvement in Hoop Machines.*—Patent dated November 13, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination of a gauge cutter with a cutter head, constructed substantially as described, and having continuous rests *a* and *b*, for the support of the hoop upon each side of the finishing cutter, as set forth.

Second. I claim the crimping roll *L*, for giving form to the hoop, as described.

No. 30,610.—ANDREW J. BARTLETT, of Romulus, N. Y.—*Improvement in Excavators.*—Patent dated November 13, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement and combination of the hollow scoop or shovel *D*, endless apron or elevator *I* and trough *N*, when hinged or jointed together, so as to allow the required adjustments of the said scoop, and operating together substantially in the manner and for the purposes specified

No. 30,611.—RICHARD C. BRISTOL, of Chicago, Ill.—*Improvement in Slide Valves.*—Patent dated November 13, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, in combination with a valve carried upon rolling supports, the use of bearing pieces of metal, above and below such supports, capable of being detached from the valve and cylinder face, in order that such bearing pieces may be made of a more durable material, or be taken out and replaced when worn or injured.

Second. In valves, mounted as above described, the wedge form of the bearing pieces *E*, in combination with the corresponding inclines *C*¹ upon the valve or cylinder face, for the purpose of adjusting the valve to its seat or to the diameter of the rolling supports *G*, substantially as described.

No. 30,612.—BENJAMIN F. CHAPPELL, of Norwich, Conn.—*Improved Plumb Bob.*—Patent dated November 13, 1860.—This invention has for its object applying to the bob the string by which it is suspended, in such a manner that it can be lengthened or shortened at pleasure, and that when the bob is not in immediate use the string may be run into the body of the bob out of the way and not liable to be broken.

Claim.—As an improved article of manufacture, a plumb bob, provided with a train of wheels, spring, and stop, and otherwise made, as shown and described.

No. 30,613.—A. F. COBB, of Chapel Hill, Mo.—*Improvement in Fire Alarms.*—Patent dated November 13, 1860.—This invention consists in the arrangement of a crank shaft, alarm bell, rattle, lever, gun, and cord, in combination with independent crank shafts, dogs, and cords, leading to various parts of a building.

Claim.—The arrangement of a crank shaft *A*, alarm bell *H*¹, rattle *C D*, lever *L*¹, gun *O*¹, and cord *J*, in combination with independent crank shafts *L W*, dogs *M Y*, and cords *P T*, leading to various parts of a building, substantially as and for the purpose set forth.

No. 30,614.—LEWIN A. COLBERT, of Baltimore, Md.—*Improvement in Warming Apparatus.*—Patent dated November 13, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The adaptation and arrangement of a warm air reservoir or receiver *A*¹, of box or niche form, and furnished with a door *B*, a bottom passage *C*, a side dampered passage *E*, and a top dampered passage *F*, all for use in combination with the ordinary furnace, hot air flue, draught or chimney flue, and flue leading into elevated chambers, substantially in the manner and for the purposes set forth.

No. 30,615.—LYMAN P. COLLINS, of Sacramento, Cal.—*Improvement in Loop Catches for Sewing Machines.*—Patent dated November 13, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* a metallic or other hard loop catcher for sewing machines, composed of a hub or main nut *a*, in Figs. 1 and 2, also an adjusting screw *e*, also check nut *f*, also rib or latch 2, so that the catch, being hard and unyielding, against which the loop comes in contact, can be so adjusted by the screw *e*, and firmly held by means of check nut *f*, that the finest thread cannot pass between said catch and the rotary hook until the proper time for its release, the whole being constructed, arranged, and operating as set forth and explained.

No. 30,616.—G. D. COLTON, of Galesburg, Ill.—*Improvement in Apparatus for Drawing Water from Wells*.—Patent dated November 13, 1860.—This invention consists in constructing and arranging the several parts.

Claim.—The employment of the shaft D, the cylinder E, the lever F, the ratchet wheel *a*, and ratchet *c*, together with the stop *n*, the several parts being constructed and arranged substantially as and for the purpose specified.

No. 30,617.—JAMES W. CRAWFORD, of Rockport, Ill.—*Improvement in Grafting Machines*. Patent dated November 13, 1860.—This invention consists in arranging on the top of a suitable standard a weighted cutter which works between two perpendicular ways operated by a foot lever for splitting the stock, and it also consists in arranging by the side of this stock splitter a reciprocating knife and inclined adjustable bed pieces for preparing the wedge on the scion.

The inventor says: I *claim*, first, the knife *a*, with its weight C, and the device described for operating it, in combination with the slotted bed plate E, stops *d d*, and gauge *y*, as and for the purposes set forth.

Second. In connection with the above, and on the pedestal A, the sliding knife *g*, its frame F, and slide rests G G, with the adjustable inclined bed pieces *e e*, arranged and operating as and for the purposes set forth.

No. 30,618.—PERRY DAVIS, of Providence, R. I.—*Improved Boat, Convertible into a Land Carriage*.—Patent dated November 13, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the combination of the clamps C D and rubber springs *a*, formed as shown, with the axle B and boat A, in the manner and for the purposes set forth and described.

I also claim the combination of the peculiarly formed rubber spring clip G and plates *g g*¹ with the axle H, hook F, and bow of the boat, in the manner and for the purposes shown and described.

I also claim the arrangement of the wheels E with the clamps C, as and for the purposes shown and described.

No. 30,619.—SAMUEL S. DAY, of New York, N. Y.—*Improvement in Fly Traps*.—Patent dated November 13, 1860.—This invention consists in the use, or employment, of a shelf, by which means the flies which shall have collected on the roller, or cylinder, and been carried round upon the same, and driven into a cage or cages, prepared for their reception, are retained in the same.

Claim.—The use or employment of the shelf F, in combination with the lever H, catch G, spring I, and lifter J, when the same shall be combined and operated in the precise manner specified, or by means substantially the same or in an equivalent manner.

No. 30,620.—JOHN DICKINSON, of Painesville, Ohio.—*Improved Last Holder*.—Patent dated November 13, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The mode of securing immovable, or nearly so, the turntable in any position of its vertical axes, by means of the bolt I, provided with reversed screws on its ends, and operating in combination with the tapering journals of the lower plate Q of said turntable, as described, and for the purpose stated.

No. 30,621.—H. WILLIAM DOPP, of Buffalo, N. Y.—*Improvement in Vapor Lamps*.—Patent dated November 13, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Mingling the vapor formed with atmospheric air above the burner, as at *a a*, Figs. 1 and 3, the vapor and the air descending through the pipe A, to be burned at the burner B, as and for the purpose specified.

No. 30,622.—DAVID F. DUNHAM, of Brook, Ind.—*Improvement in Spelling Boxes*.—Patent dated November 13, 1860.—This invention consists in enclosing within a suitable box, having a small opening in one side of its top, two or more wheels or cylinders, each of which has a movement independent of the other, and covering the peripheries of said wheels

with vowels and consonants, or combinations of vowels and consonants, making a perfect word, or an imperfect word, and arranging on the next wheel the alphabet of any language, so that by rotating one of the wheels, the letters may be grouped together to form words, or parts of words.

Claim.—The spelling box with wheels, having letters printed on them, as set forth, constructed as described, for the purposes set forth

No. 30,623.—ELBRIDGE G. DYER, of Hamilton, Ohio.—*Improved Feed Motion for Head Blocks of Saw Mills.*—Patent dated November 13, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, in combination with the ratchet wheels F F, by means of which the head blocks B B are operated, the described arrangement of the pawls *h h*¹, vibrating pieces H H, connecting rod I, hand lever L, and pivotted bars J J, whereby the operator is enabled to move the log readily, and with precision, towards the saw, so as to produce either parallel or tapering cuts, as the same may be desired, in the manner as and for the purposes specified.

No. 30,624.—E. EHLIN, of Boston, Mass.—*Improvement in Fire Alarms.*—Patent dated November 13, 1860.—This invention consists in the use of a fuse connected with an alarm, whereby the fuse, in case of a building taking fire, will conduct the flame to a thread or fuse, which holds a weight connected with the alarm mechanism, and igniting the weight-sustaining thread, or fuse, will cause the weight to be liberated, the alarm mechanism to be actuated, and the alarm sounded.

The inventor says: I *claim*, first, the employment or use of a fuse K, in connection with a weight-sustaining combustible thread or fuse *u*, applied to a lever and weight E F, connected with an alarm, to operate substantially as and for the purpose set forth.

Second. In connection with the fuse K, applied as shown and described, the perforated pipe H, one or more, and water supply pipe G, connected by a tube *m*, provided with a cock which is connected to the lever E, to operate as and for the purpose set forth.

No. 30,635.—JOHN H. ELWARD, of Ottawa, Ill.—*Improvement in Mole Ploughs.*—Patent dated November 13, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The sectional mole *e d c*, the coulter *a* and *b*, the coulter *a* being movable, with their respective loops and joints, in combination with the side draught of the plough from the link or loop at *f*, on the side of the beam A, through one of the slots in the transverse piece, for the purpose of giving any desired curvilinear direction to the ditch or drain, when the several parts are arranged and operated together as represented, and substantially as described.

No. 30,626.—ROBERT GAMBLE, JR., of Tallahassee, Fla.—*Improvement in Channel Excavators.*—Patent dated November 13, 1860.—This invention is designed to deepen, or excavate, the channels of running streams, or tide ways, by deflecting the running water against the bottom of the same.

Claim.—The employment or use of a float A, provided with an adjustable plate or platform C, and side pieces F F, substantially as and for the purpose set forth.

No. 30,627.—JOHN R. GIBBS, of Boston, Mass.—*Combined Skate Shoe, and Foot Check.*—Patent dated November 13, 1860.—This invention consists of a skate shoe, having a groove for the reception of the skate runner, and suitable means for attaching the skate shoe to the foot, so that it and the skate previously fastened to the foot may be kept in contact.

Claim.—The grooved skate shoe, constructed substantially as described, for the purpose specified.

No. 30,628.—LUTHER W. HARWOOD, of Troy, N. Y.—*Improvement in Stove Grates.*—Patent dated November 13, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, so forming and arranging an arm D, fast on the grate A, and in line, or nearly in line, with the rocking support B, of the grate, substantially as described, that the grate may be both vibrated horizontally on its central pivot C, and tilted into a vertical position upon its rocking support B, by the use of the arm D alone, substantially as represented.

Second. I also claim the combination and arrangement of a perforated sliding plate M, with the slotted casing G, of the stove or furnace, the arm D, and grate A, pivot C, and rocking bar B, substantially as and for the purpose described.

No. 30,629.—JOSEPH M. HEARD, of Prairie Station, Miss.—*Improvement in Railroad Joints.*—Patent dated November 13, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the arrangement of the tongue F, to pass into a cavity in the bar D, so as to be supported thereby, as shown and described, when said tongue is made in one piece with the bar E, and when the rails are notched and slotted, and all the parts constructed and combined, all as set forth and represented.

No. 30,630.—DE WITT C. HITCHCOCK, E. B. LARCHAR, and E. M. LARCHAR, of New York, N. Y.—*Improvement in Relief Printing Plates, &c.*—Patent dated November 13, 1860. The claim and engravings explain the nature of this invention.

Claim.—The method of producing printing plates, blocks, &c., in relief, by employing liquid silex, or other material that has a hardening effect upon chalk, clay, or other analogous substance, or that has an affinity for, or the capacity to affiliate with, the silex as a marking material, medium, or ink, to delineate lines, figures, or any desired device, upon the surface of said chalk, clay, or other material susceptible of thus becoming hardened or petrified, and then removing the intervening and unacted on soft material next the surface, by brushing or rubbing, so as to leave the said lines in relief, and finally solidifying, in a greater degree, hardening and petrifying the whole body, substantially in the manner and for the purpose set forth.

No. 30,631.—DANIEL JOHNSTON, of Eddyville, Iowa.—*Improvement in Water Elevators and Carriers.*—Patent dated November 13, 1860.—In the middle of the carriage is a wheel, or pulley A, over which a cord or rope passes, that draws the carriage and suspends the bucket. On this cord, or rope, is a knot, or lump of lead, which rests on the wheel or pulley, when the bucket is up to the carriage, and is held fast to that place by a catch D, on the side of the latch, which catch D lies on it and over it, while the bucket is carried on the track.

Claim.—The arrangement of the track, carriage, hollow pin, bucket, knot, rope, pulley A, and latches B and D, when the whole is constructed, arranged, and operated in the manner and for the purpose set forth.

No. 30,632.—JOHN P. KIRK, of Austin, Texas.—*Improved Chain Link.*—Patent dated November 13, 1860.—The claim and engravings show the nature of this improvement.

Claim.—The two pivotted hooks A A¹, constructed and put together in such a manner that the ends of one hook will abut against or lap on the ends of the other hook, substantially as and for the purposes set forth.

No. 30,633.—EDWIN B. LARCHAR, of New York, N. Y.—*Improvement in Fire Escapes.*—Patent dated November 13, 1860.—This invention consists of a hydraulic, or pneumatic elevation for raising a platform to the desired height and retaining it there, or lowering it at will; the whole being governed by proper stop cocks.

The inventor says: I *claim*, first, elevating a platform, or other equivalent device, by means of a telescope column, substantially as and for the purposes set forth.

Second. I also claim the piston joint, composed of the fast and loose collars and elastic packing, as described.

No. 30,634.—RUFUS LEAVITT, of Melrose, Mass.—*Improvement in Sewing Machines.*—Patent dated November 13, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, in a sewing mechanism, the arrangement and combination of the spool *h* with the lever C, or other moving part of the mechanism, whose movement is uniform with and relative to that of the needle, and with the screw K, or other equivalent means of adjustment, and spring *n*, all operating together in relation to the movement of the needle, substantially as and for the purpose specified.

Also, the employment of the "take-up," for the specified purpose, in combination with a spring and cam, both arranged and operating together to give the take-up the movement due to the form of the cam except when, from strain upon the thread, it is requisite for the take-up to yield to avoid breakage of the thread, which yielding the spring, as applied, permits.

No. 30,635.—MEIER ROSENBERG and HENRI SCHEUERLE, of New York, N. Y.—*Improved Spring Bed Bottom.*—Patent dated November 13, 1860.—On the side rails *a a* of the bedstead are attached side pieces *n n*, running the whole length of the bed, and which support the spiral springs *d d*, on the top of which springs the bed bottom B rests. The springs *d* may be let in some distance into the side pieces *n n*, as well as into the under side of the bed bottom B. By this arrangement the bed bottom is supported on both sides on springs.

Claim.—The arrangement and combination of hinges, with a bed bottom supported by springs, in the manner and for the purpose substantially as described.

No. 30,636.—NATHAN MAXSON, of Wilmington, Ohio.—*Improvement in Harvesters.*—Patent

dated November 13, 1860.—The claim and engravings explain the nature of this improvement.

Claim.—The arrangement of the automatic intermittently rotating platforms, V, between the finger bar R, and dividing axle C, as shown, so that the cut grain will fall over the fingers upon the said rotary platform and be discharged, as set forth.

No. 30,637.—THOMAS J. MAYALL, of Roxbury, Mass.—*Improvement in Machinery for Making India Rubber Hose.*—Patent dated November 13, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The use of a series of rollers having curved peripheries, which bear upon and work the coating or covering of India rubber or gutta percha into the surface of the woven tube placed upon a suitable mandrel, substantially as described.

No. 30,638.—WILLIAM McALLISTER, of Gerry, N. Y.—*Improvement in the Manufacture of Cheese.*—Patent dated November 13, 1860.—This invention consists in the discovery of the use of sour whey, in combination with rennet and brine, in making cheese, for the purpose of rendering the curd susceptible for the whey to escape sufficiently in the operation of pressing, thereby preventing rancidity and other damage in curing, and for improving the quality of the cheese in other respects, and saving a portion of the rennet that would be required when sour whey is not used.

The inventor says: I *claim*, first, the use of sour whey in combination with rennet, as and for the purpose set forth; and in connection therewith, I *claim*,

Second. The use of brine in the manner and at the period in the process of making cheese, for the purposes set forth.

No. 30,639.—HUGH MOROHAN, of Brooklyn, N. Y.—*Improvement in Fire Escapes.*—Patent dated November 13, 1860.—The frame A, of a sofa or other article of common household furniture B, is fitted up with hinged braces C in its bottom, and on one of its sides are two set screws D, which, together with said braces, serve to secure the frame to the sill of an ordinary window. The arbor E bears the chain-wheel F, and a chain G, which runs over said chain-wheel, and from which the baskets H are suspended, serves to lower persons or articles from the window to which the frame is secured. A brake-wheel I, arranged with a friction brake J, serves to regulate the speed of the descent.

Claim.—The arrangement and combination, as shown and described, of the brakes J K, gears L M, shaft E, drums F I, chain G, and rod d, as and for the purpose shown and described.

No. 30,640.—L. W. NICHOLLS, of North Brookfield, N. Y.—*Improvement in Odometers.*—Patent dated November 13, 1860.—This invention consists in the arrangement of a square tubular socket or sleeve, in combination with the vertical arbor which serves to communicate motion to the registering wheels, in such a manner that the said arbor is allowed to rise and fall with the motions of the carriage, and that sudden jerks or other violent motions have no injurious influence on the correct action of the register.

Claim.—The arrangement of the tubular sleeve J, in combination with the shaft I, carrying the ratchet wheel H, and with the shaft K, giving motion to the registering wheels, substantially as and for the purpose specified.

No. 30,641.—R. S. PAYNE, of Chicago, Ill.—*Improvement in Sewing Machines.*—Patent dated November 13, 1860.—This invention consists of a reciprocating disk and two loose feed rings, arranged upon the circumference of said disk, in connection with a needle working between the two feed rings.

Claim.—A reciprocating disk and two loose feed rings, arranged upon the circumference of said disk, and operated by mechanism, substantially as described, in combination with a needle working between the two feed rings, substantially as and for the purposes set forth.

No. 30,642.—CHARLES W. PEARSON, of Charlestown, Mass.—*Improvement in Swifts.*—Patent dated November 13, 1860.—This invention consists in forming the arms of hollow tubes, into the ends of which are inserted spring wires, which may be drawn out to lengthen the arms, when required, and in a convenient method of holding the arms in position after they have been adjusted with respect to each other.

The inventor says: I *claim* the combination of the hollow arms C C¹ E E, and spring wires G, for extending the same, substantially in the manner and for the purpose specified.

Second. I *claim*, in combination with the above, the hubs B and D, and thumb screw F, for holding the arms in any required position, substantially as described.

No. 30,643.—JULIUS POLLOCK, of Morrisania, N. Y.—*Improvement in Ventilating Sweat*

Leathers for Hats.—Patent dated November 13, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* making single sweat leathers for hats, with embossed protuberances at any desired distance apart filled in on the side next the hat with some light and elastic substance, substantially as described, to form yielding cushions against the forehead, as set forth.

And I also claim making such single embossed sweat leathers with crimped or embossed corrugations at the sides, when the same are stiffened by coating the inside next the hat with shellac or other water proof cement, substantially as described.

No. 30,644.—SERVETUS LONGLEY, of Cincinnati, Ohio.—*Improvement in Street Sweeping Machines.*—Patent dated November 13, 1860.—This invention consists in hanging the broom shaft in such a manner that it may be raised or depressed, so that the brooms or scrapers may be raised entirely free from the ground, if desirable; it also consists in attaching by a crank arm each broom, or scraper head or stock, to an eccentric ring, which will keep the brooms or scrapers always in a position perpendicular to the surface of the street, at the same time all the brooms are allowed to yield and accommodate themselves to the unevenness of the surface of the street.

Claim.—The eccentric ring H, arranged and combined with the brush heads, substantially in the manner and for the purposes set forth.

No. 30,645.—GEORGE S. ROUDEBUSH, of Natchez, Miss.—*Improvement in Cotton and Corn Stalk Cutters.*—Patent dated November 13, 1860.—This invention consists in the employment of a biconical roller, provided with flanches and cutters, used in connection with stationary scrapers and a rotating cutting cylinder, all the parts being placed in a suitable frame and arranged for joint operation.

Claim.—The biconical roller D, provided with the knives E, in connection with the knife cylinder H, and with or without the bars or scrapers G, all being placed in the frame A, essentially as and for the purposes set forth.

No. 30,646.—GEORGE RUGG, of Potsdam, N. Y.—*Improvement in Turning Machines.*—Patent dated November 13, 1860.—This invention consists in providing a hollow mandrel with cutting tools, and adjusting and operating the same for turning wood in various patterns.

The inventor says: I *claim* a new mode of constructing, arranging, and operating devices, for the purpose as specified.

I claim, first, the tube stock F, as attached and operated by means of the arm d, the revolving pattern L, and clutch J, as connected and operated in the manner and for the purpose specified.

Second. I claim the guard c c, as adjusted, for the purpose specified.

No. 30,647.—CHRISTIAN SHARPS, of Philadelphia, Penn.—*Improvement in Forming Cartridge Cases.*—Patent dated November 13, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Forming cases for metallic cartridges by placing a hollow cylinder in chambers of the desired form, and expanding the said cylinders within the chambers by means of plungers, through the medium of water or other suitable fluid, substantially as set forth.

No. 30,648.—D. E. SOMES, of Biddeford, Maine.—*Improved Heel Shave.*—Patent dated November 13, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The described heel shave, constructed substantially in the manner set forth, being provided with guides a a, gauge E, adjusting screws C C, set screws D D, and double-edged knife B, arranged as and for the purpose described.

No. 30,649.—GUSTAV WEDEKIND, of Philadelphia, Penn.—*Improvement in the Preparation of Transparent Pictures.*—Patent dated November 13, 1860.—The nature of these improvements is shown by the claim.

Claim.—Affixing and preserving lithographic pictures upon glass, mica, or other similar transparent substances, to be used for gas or lamp shades, screens, &c., by means of a mastic composition and a solution of silicate of soda or potassa, prepared and used as set forth and described.

No. 30,650.—THOMAS J. WEEKS, of New London, Conn.—*Improved Harness Saddle.*—Patent dated November 13, 1860.—The object of this invention is to obtain a harness saddle that will conform to the movement of the animal without galling or injuring the same by rubbing or friction, even when made to sustain a heavy load.

Claim.—The disk E, and bars D D A B, constructed, combined, and arranged substantially as and for the purpose set forth.

No. 30,651.—SAMUEL W. TYLER, of Greenwich, N. Y.—*Improvement in Harvesters.*—Patent dated November 13, 1860.—The claim and engravings explain the nature of this invention

The inventor says: I *claim*, first, the combination of the automatically adjustable head piece G, and twin plate M, or their equivalent, with the cutting apparatus arranged and operating substantially as described.

Second. I claim the iron hanger D, for a common support for the journals of the pinion and pitman shafts of a harvesting machine, when used as a strong iron brace of a light wooden frame, in combination with such frame, substantially as described.

Third. I claim the hand lever L, when constructed and used as specified, in combination with the cutting apparatus, for the purpose set forth and substantially as described.

Fourth. I claim the adjusting rod l, or its equivalent, by the use of which the driver, while on his seat, may bring the cutting apparatus to a position at right angles to the head piece, where it may be held, in combination with the head piece and cutting apparatus, for the purposes set forth and substantially as described.

No. 30,652.—ISAAC ANGELL, of Pawtucket, R. I., assignor to the PAWTUCKET HAIR CLOTH COMPANY.—*Improvement in Looms for Weaving Hair Cloth.*—Patent dated November 13, 1860.—The claim and engravings explain the nature of this improvement.

Claim.—The reopening of the shed after the failure of the hook to take a hair, without stopping or disconnecting the heddles from their source of motion, in the manner substantially as shown and described.

No. 30,653.—HORATIO N. BLACK, of Philadelphia, Pa., assignor to himself, H. KORN, JR., and E. S. BODINE, of said Philadelphia.—*Improvement in Machines for Hulling and Cleaning Rice.*—Patent dated November 13, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the huller, made of plates of metal or other suitable material, the plates being detachable and having an elastic bed as the exterior hulling surface, and the solid cone for the inner hulling surface, as set forth.

Second. I claim the combination of a rubber, constructed and operated as described, with the cylinder for chafing the grain, as set forth.

Third. I claim the brushers or polishers, constructed and operated as described, in combination with a cylinder of solid surface for polishing the grain, as set forth.

No. 30,654.—JACOB KINGER, of Pittsburgh, Pa., assignor to C. ADAMS, of said Pittsburgh *Improvement in Door Locks.*—Patent dated November 13, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* combining the roller E with the latch bolt B, for the purpose of lessening the friction when forcing the bolt back into the lock, substantially as shown and described.

No. 30,655.—FREDERICK LANDON, of Brockport, N. Y., assignor to BYRON E. HUNTLEY, JOHN M. BOWMAN, CHARLES SILLIMAN, and LAFAYETTE SILLIMAN.—*Improvement in Harvesters.*—Patent dated November 13, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the traction yoke or lever D, the rods L, the pinion shaft and the gudgeon I, as fixed fulcrum of the traction lever, in combination with the axle of the drive wheel, to secure a rolling or traction draught of the drive wheel, while making descents, and especially, when it may be necessary, in the use of the machine, to pass from declivities of greater or less degrees, for the purpose specified.

Second. The traction lever D, the rods L, the pinion shaft and gudgeon, as fixed fulcrum of the traction lever, and the axle of the drive wheel, in combination with the frame and finger bar, to secure an automatic adjustment of the finger bar to the periphery of the drive wheel, for the purpose specified, substantially as described.

Third. The combination of the traction lever D, the rod r, and the frame A, to secure an adjustment of the finger beam with respect to the periphery of the driving wheel, when the machine is used for harvesting grain, substantially as described.

No. 30,656.—JOHN McCARTY, of Philadelphia, Pa., assignor to LEYFERT McMANUS & Co., of said Philadelphia.—*Improved Horse Shoe Machine.*—Patent dated November 13, 1860. The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination of the stripper P, weighted lever L, and

carriage E, the latter having a plane parallel with that in which it moves, for receiving the weighted end of the lever, and the said plane terminating in an inclination *h*, so that the said stripper may have the desired dwell between its upward and downward movements, as and for the purpose specified.

Second. The combination of the stripper P, lever L, and rods Q and Q, or their equivalents, arranged and operating substantially as set forth, for the purpose set forth.

Third. The combination of the stripper P, the former K, and the projection *d*, of the platform B, the said projection being of the same form as, but somewhat less than the end of the former K, and arranged to coincide with the latter during the operation of the stripper, as set forth.

No. 30,657.—H. F. PHILLIPS, of Seneca Falls, N. Y., assignor to DOWNS & Co., of said Seneca Falls.—*Improvement in Apparatus for Drawing Water from Wells*.—Patent dated November 13, 1860.—This invention consists, in part, in the employment of a pivotted frame A, which is attached to the sides of the well curb B by the pivot *c*. The frame A supports the crank shaft *f* and main pulley G, in suitable bearings, provided for that purpose on each side thereof; it also carries the pall *h*, which is pivotted to an arm on the frame, in a proper position to act upon the ratchet wheel *i* on the crank shaft, to stop the motion of the bucket, should it even be required.

Claim.—The combination and arrangement of the pivotted movable frame A, or its equivalent, for sustaining the shaft *f*, and main pulley G, with the stationary pulley *j*, weight K, and bucket D, and catch lever L, substantially as and for the purposes set forth.

No. 30,658.—D. E. SOMES, of Biddeford, Me., assignor to JAMES S. ANDERSON, of said Biddeford.—*Improvement in Curing Provisions*.—Patent dated November 13, 1860.—The claim explains the nature of this invention.

Claim.—Salting and curing food and hides, in latitudes too warm for the ordinary processes to be carried on, by means of operating in excavations made in the earth, to a depth sufficient to attain the minimum temperature, and further cooled by artificial refrigeration, as set forth.

No. 30,659.—OWEN STURDEVANT, of Maquon, Ill., assignor to himself and J. S. GREGORY, of said Maquon.—*Improvement in Mole Ploughs*.—Patent dated November 13, 1860.—The object of this invention is to drain wet clay soils, by which they may be rendered profitable as arable land.

Claim.—Forming a circular hole or suitable space under the end of coulter E, in combination with a groove in the top surface of the mole tooth *a* and the closing portion *a*¹, placed behind the mole tooth, substantially as described and for the purposes set forth.

No. 30,660.—GEORGE WILLIAMSON, of Newark, N. J., assignor to L. S. GOBLE and H. E. RICHARDS, of said Newark.—*Improved Clamp for Holding Cylinders to be Polished*.—Patent dated November 13, 1860.—The flange K of the main block A prevents the sections B from springing out further than required, and said sections are cut at the point K to permit the necessary movement.

Claim.—The combination of the section B, flange K, spring *s*, screw *c*, and band *d*, substantially in the manner and for the purpose described.

No. 30,661.—RUSSELL ARNOLD, of Hartford, Conn.—*Improved Machine for Moulding Parched Corn Balls*.—Patent dated November 20, 1860.—This invention consists in so constructing the frames A and B as that they shall be operated by the revolution of the crank shaft C, and having the cup E attached to the cross bar of the frame B, directly over the cup F, which is in like manner attached to the cross bar of the frame A, so that by the revolution of the crank shaft C connected to the frame B by the rod C, the parched corn, when placed in the cup F, is compressed into balls.

Claim.—The arrangement, in combination of the frames A and B, together with the cups E and F, the pins G and H, the spiral spring *h*¹, the crank shaft C, and the connecting rod C¹, to be used for the purpose specified, substantially as described.

No. 30,662.—THOMAS B. ATTERBURY and JAMES S. ATTERBURY, of Pittsburgh, Pa.—*Improvement in Covers for Fruit Jars*.—Patent dated November 20, 1860.—This invention consists in a metallic ring, constructed with a circular shoulder, a vertical screw, and a vertical narrow slotted lug, in combination with a shouldered and lipped cover, a rubber gasket, a clamping nut, and a preserve jar with a straight neck.

Claim.—The arrangement and combination of the preserve jar H, metallic ring B, constructed with a shoulder *a*, lug *b*, slot *c*, and screw A, rubber ring gasket G, clamp nut D, and cover E, constructed with a curved lip F and shoulder *d*, all in the manner and for the purposes described.

No. 30,663.—ACHILLE BERTHOUD, of New York, N. Y.—*Improvement in Electroplating with Alloys of Gold*.—Patent dated November 20, 1860.—This invention consists in a preparation or means by which the operator is enabled to deposit a compound metal of gold and copper, or gold and silver, or gold, copper, and silver, upon a metallic surface, to resemble an alloy of gold of any desired color or fineness, and of any required thickness.

The inventor says: I *claim*, first, the employment of the solution of copper prepared substantially in the manner as above set forth.

Second. The employment of solutions of gold and silver, prepared substantially as above set forth, in admixture with the described solutions of copper.

Third. The above described process of electroplating metal with alloys of gold, so as to produce any desired color.

No. 30,664.—L. D. BROWN, of St. Louis, Mo.—*Improvement in Harvesters*.—Patent dated November 20, 1860.—In the upper part of the guide bar E a bent lever G is fitted, and to the angle of this lever is attached by a pivot *h* a bar H, which is secured to the draught pole F; the lever G is fitted on a rod *h*¹ in the part of the guide bar, and is allowed to work freely thereon.

Claim.—The arrangement of the adjustable guide loop *f* and diagonally hinged bar I with the pole F, frame A, platform B, slotted guide bar E, lever G, and bar H, as and for the purposes shown and described.

No. 30,665.—GEORGE F. BUCKLEY, of West Barnstable, Mass.—*Improved Settee or Chair*.—Patent dated November 20, 1860.—Settees are often required for public halls and other places which may be folded up when not in use, so as to occupy but little space and be easily transported or moved when necessary, and this invention has for its object to supply this want.

Claim.—The combination of the hinged back F with the hinged and pivotted legs, operating as set forth, for the purpose specified.

No. 30,666.—JOHN CHAPPELL, of Green, N. Y.—*Improvement in Horse Rakes*.—Patent dated November 20, 1860.—This invention consists in the construction and arrangement of the crank handle, levers, and spring catch, operating together to elevate the rake.

Claim.—The arrangement and combination of the prongs *g*¹ *g*¹, the rollers *f f*, levers G G, crank handle F, and spring catch I, in the manner described, for the purposes set forth.

No. 30,667.—JACOB L. CLEWELL, JR., and WILLIAM F. SCHATZ, of Nazareth, Pa.—*Improved Apple and Potato Parer*.—Patent dated November 20, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim*, first, the combination of the rotary fork G with the travelling and rotary cutter Z, arranged substantially as and for the the purposes set forth.

Second. In connection with the travelling and rotary cutter Z, and rotary fork G, the sliding or adjustable wheel E, operated through the medium of the levers H J, and shaft I, for the purpose of stopping the rotation of the article D¹, when necessary to allow the cutter to pass into depressions or sunken places in the surface of said articles.

Third. The combination of the two frustrums of cones N O with the adjustable elastic ring or band Q, arranged substantially as shown, to vary the speed of the travelling movement of the cutter Z, as circumstances may require.

No. 30,668.—SAMUEL W. COLLINS, of Canton, Ct.—*Improvement in the Manufacture of Edge Tools*.—Patent dated November 20, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the casting of axes and other tools and implements partly of iron and partly of steel, or of different qualities of steel, by pouring in a melted state, first one of these metals and then the other, thus superseding the necessity of welding or otherwise attaching the different metals together in the way heretofore practised, all of which is done in the manner and for the purpose set forth.

Second. The casting of edge tools from steel, or from steel and iron combined, by leaving the steel edges thick in the first instance and afterwards drawing them down under a hammer, in the manner described.

No. 30,669.—ISAAC CRESSMAN, of Philadelphia, Pa.—*Improvement in Gas Stoves*.—Patent dated November 20, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination, with gas stoves, ovens or heaters having double walls or plates at two opposite sides and top and bottom thereof, so as to constitute a continuous jacket or hot air chamber, in which the products of the combustion of gas may be allowed to circulate at pleasure, of a burner or burners surmounted with inverted truncated cone-shaped cups having air openings in the bottom and a flange on the top, so that the said cups may be supported in corresponding holes in the bottom plate of the oven, in such a manner as that

it or they shall be flush or nearly so with said bottom plate, and that an unobstructed circulating medium for the heated gases may be obtained.

No. 30,670.—JULIUS C. DICKEY, of Saratoga Springs, N. Y.—*Improved Gold Washer and Amalgamator*.—Patent dated November 20, 1860.—The operation of this machine is as follows: The quartz, sand, or other matter, being put into the hopper *g*, passes through the same into the opening as shown by the dotted line in the upright *b*, and through the openings in the base of said upright into and between the adjustable plates *c* and *d* where it is crushed, ground, or pulverized, and forced by said plates *c* and *d* into outlets *x* which lead to channel No. 1, said outlets being under the circular channel in which the bearing *k* works in. When channel No. 1 becomes full of pulverized quartz, sand, or water, it flows over the circular projections *s* into channel No. 2, and so on through the channels; the stop-cocks being turned as aforesaid to let out the water or mercury when it is desirable to remove the gold.

The inventor says: I *claim*, first, the bearing *k*, for the purpose specified.

Second. The arrangement and use of the adjustable plates *c* and *d*, for the purposes set forth

No. 30,671.—OREN C. DODGE, of Brooklyn, N. Y.—*Improved Adjustable Table*.—Patent dated November 20, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the racks *d d*, in the standards *b b*, combined with the pawls *g g*, and rope or cord *h*, in the manner and for the purposes specified.

In combination with said racks *d d* and pawls *g g*, I *claim* the sector *i* and clamp *k* for regulating the inclination of the table, as set forth.

I also *claim* the table *m* on the bracket *l*, connected by the eyes *3 3*, the rack *d*, in the manner and for the purposes specified.

No. 30,672.—DAVID ELDRIDGE, of Philadelphia, Pa.—*Improved Method of Hanging Circular Saws*.—Patent dated November 20, 1860.—The claim and engravings explain the nature of this invention.

Claim.—So arranging the driving and driven pulleys *O* and *T* as to transfer the strain caused by the resistance while sawing from the saw arbor to the arbor of the driving pulley, for purposes set forth.

No. 30,673.—DAVID EYNON, of Philadelphia, Pa., assignor to CHARLES E. SMITH, of Philadelphia aforesaid.—*Improvement in Making Railroad Chairs*.—Patent dated November 20, 1860.—The claim and engravings explain the nature of this invention.

Claim.—In combination with the horizontal and vertical bars that are to compose the pile, the central plug, core, or brace of wood, and the external tie of wire, so that the pile may be inverted and charged and heated in this inverted position in the furnace, substantially as described.

No. 30,674.—DEWITT C. FARRINGTON, of Lowell, Mass.—*Improvement in Cooking Stoves*.—Patent dated November 20, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Dividing the oven space by such a form of bent flue communicating with the fire chamber, as to form thereby two separate ovens, each containing a deep and shallow portion or compartment, substantially as described.

No. 30,675.—HENRY B. GOODYEAR, of New Haven, Ct.—*Improvement in Vulcanizing India Rubber Tips*.—Patent dated November 20, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the employment of a cast iron tip mould or former, made hollow or otherwise equivalently constructed, to establish a pinned connection of it with the tray or platform which serves to carry the moulds and tips, substantially as specified.

Second. Providing the tip mould or former with a hook or pin, to which the tip may be hitched, and which serves to keep the tip to its place on the mould, essentially as set forth.

Third. In the vulcanizing of India rubber shoe tips or other like articles, the process described of holding the tips to their places and the moulds in their position, substantially as specified.

No. 30,676.—JOHN J. GWYNN, of Plainfield, N. J.—*Improvement in Valve Gear of Steam Engines*.—Patent dated November 20, 1860.—*a* represents a slotted arm fast to the rock shaft *a*¹; *b* is a curved cam slot in the friction plate *c*, which turns freely in the rock shaft. The valve wrist pin *d* passes through both the slot in the rock shaft arm and the curved cam slot in the friction plate, the relative position of the wrist pin in the slotted arm being determined by the curved cam slot in the friction plate.

The inventor says: I *claim*, first, the friction cam plate, in combination with the slotted arm and movable wrist pin, substantially as described.

Second. I claim, in combination with the governor of a steam engine, the movable wrist pin, slotted arm, friction cam plate, ratchet and pawl, substantially as described and substantially for the purposes set forth.

No. 30,677.—HORACE R. HAWKINS, of Akron, Ohio.—*Improvement in Hay and Straw Cutters*.—Patent dated November 20, 1860.—This invention consists in using the hooked bolts, in connection with a right angled shaft, for the purpose of making the knife adjustable.

Claim.—The use of the hook bolts $H H^1$, in connection with the right angled shaft, for making the knife adjustable.

No. 30,678.—BIRDSILL HOLLY, of Lockport, N. Y.—*Improvement in Hose Coupling*.—Patent dated November 20, 1860.—This improvement is designed more especially for the connection of sections of hose and other pipes together, and with pumps, hydrants, engines, boilers, &c., so as to dispense with the use of a wrench for connecting and disconnecting.

Claim.—A nut constructed with gears or teeth a , and fulcra c , surrounding its hub or centre, substantially in the manner and for the purposes shown and described

No. 30,679.—CHARLES B. HUTCHINGS, of Rochester, N. Y.—*Improvement in Grain Separators*.—Patent dated November 20, 1860.—This invention consists in an improved arrangement and combination of parts, whereby wheat may be cleaned and separated from oats, small grain, &c., with ease.

Claim.—The arrangement of the tubes $T^1 T^2$, and sieves S , with the spouts $E n m$, chamber I , and fan F , all constructed and operating substantially as and for the purpose set forth

No. 30,680.—J. BURROWS HYDE, of Newark, N. J.—*Composition for Supports in Blow-pipe Operations*.—Patent dated November 20, 1860.—This invention consists in the manufacture of cakes, or plates, or blocks, for surface heating under the blow-pipe flame from a lamp, or gas made of a mixture of charcoal dust and fine plaster of Paris, made by water into a thick paste, and pressed into moulds of proper size and shape. The plaster setting and hardening, the cast gives it, under pressure, proper tenacity.

Claim.—The described alchemist plates as an article of manufacture, made in the manner and for the purpose set forth.

No. 30,681.—JAMES JOHNSON, of Garysburgh, N. C.—*Improvement in Metallic Hubs for Carriage Wheels*.—Patent dated November 20, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the combination and arrangement of the hub A , cap D , and the screw shaft on the shoulder of the spoke, whereby the spoke is securely held in its position.

I also claim the combination and arrangement of the screw nut k , on the arm of the axle, with the pivot N , in the cap D , as described, for the purpose of preventing the oscillation of the hub on the arm of the axle

No. 30,682.—SIMON P. KASE, of Danville, Pa.—*Improvement in Machines for Cleaning Rice*.—Patent dated November 20, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the circulation of a stream of cold water around the pot or vessel in which the rice is contained while being cleaned, substantially in the manner and for the purpose described.

Second. The bell-mouthed hub C , when arranged to operate in relation to the bottom of the pot, substantially as set forth.

Third. The grooves c^1 in the bottom of the hub C , when arranged and operating as described, for the purpose set forth.

Fourth. The combination of a stream of water flowing around the pot with a stream of air passing through the grain, substantially as and for the purpose set forth.

Fifth. The combination of the elevator E , hopper boy g , and cooling tub F , when arranged for joint operation, substantially as set forth.

Sixth. The combination of the scoops d , with the flange 6 , as described.

No. 30,683.—J. C. LOVELAND, of Springfield, Vt.—*Improvement in Spring Hooks for Clothing*.—Patent dated November 20, 1860.—This invention consists of a hook constructed in a peculiar manner, with a spring point, which yields for the passage of the eye, or loop, in hooking, and retains said eye or loop sufficiently to prevent the same unhooking by the ordinary movements of the body and springs, as the eye is pressed through the hook in the act of unhooking by hand.

Claim.—The spring hook for clothing, formed as specified, with the springing point 4, for the purposes and as set forth.

No. 30,684.—J. W. MOFFITT, of Harrisburg, Pa.—*Improvement in Artificial Teeth.*—Patent dated November 20, 1860.—This invention consists in the combination of different materials, whereby, says the inventor, I am enabled to produce artificial teeth and gums, in the condition which I term "non-sectional" block work, or a full set of the same for either jaw, in one homogeneous, solid, and continuous block upon the plate, with scarcely any appreciable shortening, or shrinking, in the length or form of the curve of the set.

Claim.—As an improved article of manufacture, the artificial teeth and gums, made as described.

No. 30,685.—HIRAM MOORE, of Brandon, Va.—*Improvement in Seed Drills.*—Patent dated November 20, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the conduit or passage H, arranged between the bottom of the hopper and the discharge, in combination with the oblique discharge I, and the toothed distributing cylinder C, substantially as described and for the purposes specified.

Second. I claim the combination of the separate bearings of the cylinder with a single shaft bearing in the cylinder, shorter than the cylinder and larger than the shaft, in the manner and for the purposes substantially as specified.

Third. I claim a distributing cylinder for seeding machines, having a bevelled bearing, substantially in the manner and for the purposes specified.

No. 30,686.—HENRY A. NEVERS and CHARLES ROSS, of Claremont, N. H.—*Improvement in Churns.*—Patent dated November 20, 1860.—This invention consists in causing the rotary motion applied to a shaft to operate an eccentric pin, which plays in a groove or slot cut in a gate or slide attached to the dash rod, by which means the dash is raised and lowered vertically within the churn as required.

Claim.—The combined arrangement of the driving shaft F, face plate and crank pin H C, with the vertically reciprocating carriage I, provided with a horizontal slot d, and the rod J of the dasher, the whole being constructed and operating as specified, for the purpose set forth.

No. 30,687.—JOHN NORTH, of Middletown, Ct.—*Improved Mousing Hook.*—Patent dated November 20, 1860.—This invention consists in so constructing and arranging it as to be applied to the rigging of the vessel quickly, and to be adjusted securely to the rigging of a vessel by hooking to it and of pressing the tongue against the end of the hook which locks it fast.

Claim.—An improved mousing hook, when arranged substantially as and for the purpose described, forming a new and improved article of manufacture.

No. 30,688.—CHARLES G. PAGE, of Washington, D. C.—*Improvement in Aural Instruments.*—Patent dated November 20, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the deflector A B E, to be applied to the ear, substantially as described, said deflector consisting of a simple reflecting surface applicable to the ear, and conveying vibrations to the external meatus directly, without the aid of a pipe or tube, and being constructed without reverberating cavities; and also so constructed as to intercept all aerial vibrations except those coming in one direction, viz., those which enter the open space at its expanded portion, all substantially in the manner and for the purposes set forth.

I also claim the combination of the deflecting instrument with hats, caps, or bonnets, in the manner set forth.

No. 30,689.—CHARLES H. SMITH, of Providence, R. I.—*Improved Machine for Punching Horse Shoes.*—Patent dated November 20, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination of the punching lever with a series of jointed punches, each of which can be adjusted independently of the others, so that a series of holes can be punched in different directions of obliquity to the plane of the surface of the shoe or other object to be acted upon, substantially as described.

Second. I also claim the adjustable pronged holder, Fig. 6, for the purpose of securing the object to be punched firmly to the table, and thereby preventing the breaking of the punches as they are withdrawn.

No. 30,690.—S. PETTIBONE and O. PETTIBONE, of Corunna, Mich.—*Improvement in Grain Separators.*—Patent dated November 20, 1860.—This invention consists in connecting the shoe of the separator with its fan case, and hanging the same in such a way as to admit of their adjustment both longitudinally and transversely.

Claim.—Hanging the shoe of a grain separator, when connected with the fan case as

shown and described, by means of the pins *e g*, arranged substantially as and for the purpose set forth

No. 30,691.—F. F. SMITH, of Momence, Ill.—*Improvement in Making Plough Plates from Molten Steel*.—Patent dated November 20, 1860.—The claim and engravings show the nature of this invention.

Claim.—Making plough plates of irregular forms and of variable thicknesses by pouring molten steel into iron moulds, in the manner and for the purpose set forth.

No. 30,692.—MICHAEL E. RUDASILL, of Shelby, N. C.—*Improvement in Hatchets*.—Patent dated November 20, 1860.—This invention consists in the employment of a revolving spring claw in combination with the hatchet.

Claim.—The employment of the rotating spring claw C in combination with the hatchet A, the same being used substantially as and for the purpose specified

No. 30,693.—JOHN RUEG, of St. Louis, Mo.—*Improved Brush Making Machine*.—Patent dated November 20, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the use of the nozzle, constructed substantially as described, in combination with the needle, for the double purpose of opening the loop and feeding the bristles through.

Second. I claim the combination of the spring clamp H with the head *u*, whereby the brush block is held up against the said head while the needle operates through it.

Third. I claim the combination of the pincers with the needle bar, substantially in the manner described, for the purpose specified.

Fourth. I claim opening and closing the pincers by means of a cam lever T and spring C, as set forth.

Fifth. I claim the combination of the levers S and R with the needle bar and the pincers, whereby those two devices are made to operate as described.

Sixth. I claim the combined use of the hopper or feeder box and the claw wheels M, and also the combined use of the gauge T with the said claw wheels, and the use of the claw wheels in combination with each other, all for the purpose specified.

Seventh. I claim the lever R in connection with the claw wheels and the needle bar, whereby the bristles are divided into tufts, and the tufts put into the brush back simultaneously.

No. 30,694.—WILLIAM A. SANDS, of Brooklyn, N. Y.—*Improvement in Ship Sails*.—Patent dated November 20, 1860.—This invention consists in making sails for vessels with corded or roped seams.

Claim.—The arrangement of the ropes *a* with the edges *c c* of the sail, in the manner shown and described, when the said edges are attached to said ropes by stitching so as to avoid lapping or banding, all as set forth.

No. 30,695.—JACOB SCIEFFERLIN, JR., of Tioga, Pa.—*Improvement in Straw Cutters*.—Patent dated November 20, 1860.—This invention has for its object the feeding of the substance to be cut, with a positive movement, or with a device that will insure its proper movement towards the knife at each vibration of the same.

Claim.—The arrangement of the rack bar L, with the pinions *l l*¹, the latter having ratchets *n*, attached, into which pawl *o* of shaft M¹ engages, feed roller P, reciprocating bottom O, and lever K attached to yoke G of shaft H, as and for the purpose set forth.

No. 30,696.—ARCHIBALD G. SHAVER, of New Haven, Conn.—*Improvement in Scalpels*.—Patent dated November 20, 1860.—This invention consists in forming the blade of a cutting instrument double concavo-convex, or spoon shaped, the outline being in general configuration like the bowl of an ordinary spoon, the under side being convex and the upper side concave, the rim being either plain or chamfered off to a cutting edge.

Claim.—The double concavo-convex or spoon-formed cutting instrument, constructed in the manner and for the purposes described.

No. 30,697.—ADAM R. REESE, of Phillipsburgh, Pa.—*Improvement in Fodder Cutters*.—Patent dated November 20, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the feed rollers G and H, the endless chains F and O, arranged as described, for the purpose of varying the speed of the rollers, and for the purpose of causing the two rollers to revolve at different rates of speed, substantially as set forth.

No. 30,698.—ROBERT S. STUBBS, of Claremont, N. H.—*Improvement in Attaching and*

Detaching Ships' Boats.—Patent dated November 20, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the employment of a capstan barrel, to which the endless rope or chain E is applied to take up the slack in raising a boat, and which barrel is operated on by a worm pinion H and wheel H¹, between which and the capstan the pawl 7 and wheel 6 are fitted, the whole acting in connection with the brake F, to raise or lower the boat, as specified.

Second. I claim the latches 4 in the inverted position shown, to take the bolt heads M M, in the manner specified, when combined with the lever 3 and rod L, for disconnecting said latches, and with the lowering apparatus, for the purposes and as set forth.

No. 30,699.—HORATIO N. WILBUR, of Keokuk, Iowa.—*Improvement in Soap Composition.*—Patent dated November 20, 1860.—This mixture is composed of the following ingredients: One and a half gallon of soft water, six pounds of shaving soap, six ounces of sal soda, two ounces of turpentine, two ounces of olive oil, two ounces of ammonia, two ounces of alcohol, two ounces of marble dust, one ounce of dissolved camphor, one ounce of white rosin, one ounce of dissolved alum, one fourth ounce of Prussian blue or Chinese vermilion, one fourth ounce of oil of sassafras; boil till well dissolved.

Claim.—The mixture composed of the materials in the proportions and manner and for the purposes set forth.

No. 30,700.—STEPHEN WILCOX, JR., of Westerly, R. I.—*Improvement in Air Engines.*—Patent dated November 20, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination and arrangement of the two single acting working cylinders and pistons, with the two changing cylinders and pistons, so as to operate together, substantially as described, for the purposes set forth.

Second. The combination and arrangement of the eccentric H, short connection h, idle lever I, link g, and the changing piston or pistons b, together with suitable means for communicating the motion to the latter, for the purpose of giving the proper periods of rest and motion to the changing pistons b, substantially as specified.

No. 30,701.—STEPHEN WILCOX, JR., of Westerly, R. I.—*Improved Air Engine.*—Patent dated November 20, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, in combination with an air engine in which the air and gases are heated by combustion within the cylinder, or in a chamber leading thereto, the use of a regenerator F, substantially as and for the purpose described.

Second. Gradually supplying the combustible gas or vapor for a gas engine, operating substantially as described, as it is consumed, and in the proper quantity for each stroke, by means of the pump G, or its equivalent, for the purpose set forth.

Third. Combining a quantity of cooler air with the products of combustion, by the combined action of piston b and valve M, or their equivalents, substantially as described, for the purpose of preserving a safe degree of heat within the cylinder, as set forth.

Fourth. The supplemental valve m, arranged and operating substantially as and for the purpose specified.

Fifth. The arrangement of the evaporator N, reservoir O, and heater P, substantially as described and for the purpose set forth.

Sixth. Placing a piece of fire brick L, or equivalent substance, in close proximity to the burner j k, for the purpose specified.

No. 30,702.—SAMUEL M. WITMER, of Cincinnati, Ohio.—*Improvement in Securing Railroad Rails to the Cross Ties.*—Patent dated November 20, 1860.—This invention has for its object a cheap and secure mode of joining T rails to the customary wooden cross tie, by means of an arrangement of peculiarly formed confining plates, in a transversely joined tie.

Claim.—The combination of the deep vertical gain l, gib E e, shoe D d, and bevelled sides 2, the whole being constructed and operating in the manner and for the purposes set forth.

No. 30,703.—M. L. CALLENDER, of New York, N. Y., assignor to himself, the WARREN CHEMICAL AND MANUFACTURING COMPANY, and ELBERT PERCE, of said New York.—*Improvement in Hydro-Carbon Burners.*—Patent dated November 20, 1860.—This invention consists in providing a hydro-carbon air-mingling vapor burner, with appliances, by which sufficient heat is generated in the burner to evaporize coal oil and other hydro-carbon fluids.

Claim.—The employment of the auxiliary jets and cap or heater D, in combination with the air-mingling chamber C, substantially as and for the purposes shown and described.

No. 30,704.—WILLIAM CROTZER, of Spruce Creek, Penn., assignor to himself and SAMUEL

BEAMER, of said Spruce Creek.—*Improvement in Grain Cleaning Machines*.—Patent dated November 20, 1860.—This invention relates to grain cleaning machines of that class which are designed to separate smut and other impurities from the grain, and consists in a novel construction and arrangement of screens, fans, blast spout, and a scouring device, whereby the desired work is performed.

The inventor says: I *claim*, first, the arrangement of the hopper S, shoe Q, boxes O N, and fan box C, as shown, the hopper, shoe, and box O, being provided respectively with the screens T R P, as described, all constructed and operating as and for the purpose set forth.

Second. The scouring device, formed of the cylinder I, perforated as shown, and having the projections and knobs *j k*, at its inner side, and the rotating disks J R, provided with the beaters L, and the fan H, on the shaft B, in combination with the boxes N O, shoe Q, and the spout E, the latter communicating with the fan boxes C G, and all arranged for joint operation, as and for the purposes set forth.

No. 30,705.—ARBA SEAMANS, of Bowmansville, N. Y., assignor to MARION SEAMANS, of said Bowmansville.—*Improvement in Washing Machines*.—Patent dated November 20, 1860.—This invention has for its object the construction of a machine which shall, by mechanical action assimilating the motion of human hands, perform the operations of rubbing, squeezing, or pounding, and turning the garments at the same operation.

Claim.—The combination and arrangement of the several rubbing and pounding blocks H H, attached to the spring slats or arms G G, and acting simultaneously, but separately, the concentric bottom D having its upper portion corrugated, and its lower portion plain or smooth, and the butting "board or back" *m*, substantially as and for the purpose specified.

No. 30,706.—V. VAN VLECK, of New York, N. Y., assignor to himself and RALPH LOCKWOOD, of said New York.—*Improvement in Dental Chairs*.—Patent dated November 20, 1860.—This invention consists in the arrangement of a longitudinally sliding bolt, in combination with the seat of a chair and with two hemispheres, one working inside the other in such a manner that by depressing said bolt the seat of the chair may be retained in any desired position, whether horizontal or inclined; also in the combination with said longitudinally sliding bolt, and with the two hemispheres of two toggle arms on the head of the bolt and acted upon by a treadle in such a manner that by depressing the treadle the two hemispheres are locked and the seat retained in its position.

The inventor says: I *claim*, first, the arrangement of the longitudinally sliding bolt G, in combination with the seat A, and the hemispheres B and F, constructed and operating substantially in the manner and for the purpose set forth.

Second. The arrangement of the toggle arms H, and slotted treadle I, in combination with the bolt G, seat A, and hemispheres B and F, constructed and operating substantially as and for the purpose specified.

No. 30,707.—ALBERT M. WHITE, of Hartford, Conn., assignor to ROGER & BROTHER, of Waterbury, Conn., and the HARTFORD MANUFACTURING COMPANY, of Hartford, Conn.—*Improvement in Burnishing Machines*.—Patent dated November 20, 1860.—This improvement consists, first, in making a revolving cylindrical head, securing it upon a shaft in a proper manner, and arranging a series of yielding pressure burnishers; and second, in combination therewith, arranging a sliding holder stock, made in a proper manner, so as to present the surface of the work to be burnished, (held by said sliding holder stock,) in a proper manner to the action of the burnishers, and being more especially adapted for burnishing concave and convex surfaces.

The inventor says: I *claim*, first, the revolving burnisher head *a*, substantially as described, whereby I am enabled to present the surface to be burnished to the ends of a series of burnishers, arranged substantially as and for the purpose described.

Second. I claim the arrangement of the sliding stock *d*, holder *c*, cam or pattern *f*, in combination with the head *a*, substantially as and for the purpose described.

No. 30,708.—WILLIAM H. ADLE, PRESTON D. MILES, and GEORGE CUSTER, of Norristown, Pa.—*Improvement in Corn Planters*.—Patent dated November 27, 1860.—This invention consists in the employment and combination of different devices.

The inventors say: We *claim*, first, the combination of the two frames A and D, standards *a a*, shaft *m*, and chains *o o*; all being arranged substantially as and for the purpose set forth.

Second. We claim hoppers K, trough H, slides *c c*, pitman J, connecting rods L L, automatic discharge spouts R R, and clutch coupling *r*, when the whole shall be constructed and arranged substantially as and for the purpose set forth and described.

No. 30,709.—JAMES H. ANDERSON and EDWARD H. ANDERSON, of Easton, Md.—*Improve-*

ment in Cultivators.—Patent dated November 27, 1860.—In this invention there is employed a cast metal, or a wooden shoe, shod with metal, provided with suitable handles, and having a toothed cylinder behind it, all arranged to operate and effect the desired end.

Claim.—The combination of the shoe A, and toothed cylinder E, constructed and arranged to operate substantially as and for the purposes set forth.

No. 30,710.—HAINES AUSTIN, of East Liberty, Ohio.—*Improvement in Water Carts.*—Patent dated November 27, 1860.—This invention consists in the arrangement of devices.

Claim.—As a new agricultural implement, a cask, with journals, draught frame and wheels, the whole being constructed and arranged in the manner and for the purposes specified.

No. 30,711.—LUTHER B. BENTON, of Penn Yan, N. Y.—*Improvement in Cultivators.*—Patent dated November 27, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the tooth C, shares and land side D, frame A, and bars E; the whole being constructed as described, for the purpose set forth.

No. 30,712.—ANDREW BEUKELMANN, of Langford, N. Y.—*Improvement in Ploughs.*—Patent dated November 27, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Connecting the forward portion of the bottom A, of the plough, with the beam, by means of the adjustable coupling arms C D, the arm D being secured to the beam by the face *c* and bolts *d d*, as specified, and connecting the rear portion of said bottom A, with the beam, by means of the pivotted connecting bar G, and hand screw H, the connection of the said bottom with the handles being effected by the eye *n*, and projection *o*, or their equivalents; the whole arranged, combined, and operating substantially as set forth.

No. 30,713.—BENJAMIN BOWER, of Millersburg, Ohio.—*Improvement in Corn Planters.*—Patent dated November 27, 1860.—This improvement relates to a corn dropper that can be held in the hand with the hoe, so arranged with a slide and levers that a certain number of grains of corn, no more or less, will drop into a hill, which are then covered with a hoe.

Claim.—The vessel A, in combination with the slide F, levers M and R, and connecting rods I and P, or their equivalents, when these several parts are constructed, arranged, and operated as and for the purpose set forth.

No. 30,714.—JOHN BOYNTON, of East Hartford, Conn.—*Improvement in Breech Loading Fire Arms.*—Patent dated November 27, 1860.—This invention consists in the peculiar method of forming the breech part and attachments of a rifle, or other fire arm.

Claim.—The rack *c*, pinion D, main spring H, in combination, actuated by the lever B, in the manner as described.

No. 30,715.—ERNEST W. BRIDING and FRANCIS G. MAXWELL, of Baltimore, Md.—*Improvement in Horse Collars.*—Patent dated November 27, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The new article of manufacture described, viz: a horse collar, constructed of glazed canvas and leather, in the manner and for the purpose specified.

No. 30,716.—EDWIN LEE BROWN, of Brooklyn, N. Y.—*Improved Regulator for Heating Apparatus.*—Patent dated November 27, 1860.—This invention consists of a tight air vessel placed within the hot air chamber, the expansion and contraction of the air within said air vessel, caused by the changes of temperature in the air chamber, being employed through the intervention of suitable mechanism to operate one or more dampers for regulating the fire, to keep the hot air chamber as near as possible at the predetermined temperature.

Claim.—The air vessel H, with its stop cock *i*, and regulator *m*, as combined and arranged with the dampers *e* and *b*, and the pipes G and *d*, for the purpose specified.

No. 30,717.—J. SILAS BROWN, of Green Point, N. Y.—*Improved Baby Jumper, Couch, and Carriage.*—Patent dated November 27, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim, first, the frame for holding the baby, composed of four posts A A A A, bottom and top B and B¹, grooved and perforated side boards C C, for supporting respectively the back E, and table D, all arranged substantially in the manner described.

Second. I claim the spring arms *c c*, and straps *f f*, in combination with the posts A A A A, and perforations *e e e*, in the side boards C C, as and for the purposes set forth.

Third. I claim the post F, arranged as set forth, and secured to the seat by a spring bolt *j*, and tenon *i*, as and for the purposes described.

No. 30,718.—C. H. BURBRIDGE, of Middletown, Conn.—*Improvement in Cotton Scrapers*.—Patent dated November 27, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Attaching the scraping wing of a cotton scraper to a suitable carriage or plough frame by a hinged joint and pivotted brace rod K, so as to allow said scraping wing to rise and fall with the uneven surface of the ridges, substantially as set forth.

No. 30,719.—CYRUS CHAMBERS, JR., of Philadelphia, Pa.—*Improvement in Machines for Folding Paper*.—Patent dated November 27, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, in folding a sheet where an inset is to be cut off, placing the inset by automatic mechanism on the outset and in proper position to receive the last fold.

Second. Combining in one machine the mechanism for cutting off the inset, placing it on the outset or main sheet in proper position, and folding it therewith.

Third. The combination, with folding rollers, of rotating cutters, when both are adjusted in the manner as and for the purposes described.

Fourth. The supplemental stop H¹, against which the inset comes when made adjustable with, as well as independently of, the stop H, as and for the purpose specified.

No. 30,720.—C. A. CLARK, of Bloomfield, Iowa.—*Improvement in Cultivators*.—Patent dated November 27, 1860.—This invention consists in the arrangement of the crank, axle, gauge, or propelling wheels, lever, rear shares, forward shares, longitudinal bars, perforated transverse bars and handles.

Claim.—The arrangement of the crank axle D, gauge or propelling wheels F F¹, lever G, rear shares h¹ h¹ h¹, forward shares h h, longitudinal bars A a b c d, transverse perforated bars c c, and handles m m¹, all in the manner and for the purposes described.

No. 30,721.—I. W. COLLINS and R. Y. WILKINSON, of Clinton, La.—*Improvement in Cotton Scrapers*.—Patent dated November 27, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim* the arrangement of the hoe wheel E and shaft D with the yielding bar F and spring K, for the purpose of automatically raising the hoe wheel after it has been depressed by the operator, substantially in the manner described.

We also claim, in combination with a spring or yielding rotary hoe wheel for thinning cotton, the adjustable and non-yielding mould ploughs secured to the rear supports of the machine, for the purpose of thinning and moulding cotton at one operation, substantially in the manner described.

No. 30,722.—JOHN COLLMAN and HARM FEENDERS, of Freeport, Ill.—*Improvement in Glass Cutters*.—Patent dated November 27, 1860.—This invention consists in the use of a regulator or adjustable bearing on the face of the bit, to cause the diamond to bear upon its highest or sharpest point; in a pivotted and spring connection between the handle and bit; and also in the construction and application of an adjustable breaker.

The inventors say: We *claim*, first, the adjustable regulator E, applied to the face of the bit B, substantially as and for the purposes set forth.

Second. The combination of the cavity b, spring S, and pivot connection a, between the bit and handle, operating in the manner and for the purposes explained.

Third. The described combination of the fixed jaw F, sliding jaw F¹, and set screw G, with the handle A of a glass cutting instrument, for the object stated.

No. 30,723.—TULLY R. CORNICK, of Cap au Gris, Mo.—*Improvement in Ploughs*.—Patent dated November 27, 1860.—This invention consists in the arrangement and combination of parts.

Claim.—The combination and arrangement of the cross piece w, tongue m, axle z, wheels x, pieces c, cross piece w, pieces k, cross pieces h, helves n and P, chains S, ploughs O Q Z Y, rod v, levers c e f, and seat l, substantially as described, for the purposes set forth.

No. 30,724.—CHARLES F. CORY, of Lebanon, Ill.—*Improvement in Furnaces*.—Patent dated November 27, 1860.—This invention consists in the construction of a furnace having for the desired object economy of fuel, more perfect combustion, greater equality of heat, together with greatly diminished labor in the management and in economy of time.

Claim.—The special construction and arrangement of a furnace, having one or more open fronts e e f f, Fig. 1, and the cold air chamber e² e², Fig. 2, with the perforated or ventilating fire back g g, hot air chamber I, and valve K L, the diaphragm drop guard or suspension back P P, the cut-off n, and check wall q, as fully set forth and described.

No. 30,725.—TRUMAN ESTES, of North Bennington, Vt.—*Improvement in Friction Brakes*.

for *Bobbins*.—Patent dated November 27, 1860.—The nature and object of this invention are shown in the claim and engravings.

Claim.—A self-adjusting or regulating brake *c*, constructed and operating substantially as described and represented, for giving an equal and proper tension to threads or yarns that are being drawn off.

No. 30,726.—R. H. EWING, of Clives, Ohio.—*Improvement in Hillside Ploughs*.—Patent dated November 27, 1860.—The claim and engravings explain the nature of this invention.

Claim.—In a hillside plough, with two mould boards *F F*¹, the manner of securing and of operating the mould boards, viz: by means of horizontal arms *q q*, catch *t*, and groove in point *k*, together with the rods *v*, or their equivalents, all arranged and operating substantially as and for the purposes set forth.

No. 30,727.—SAMUEL FISHER, of West Windsor, N. J.—*Improvement in Ploughs*.—Patent dated November 27, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the combination of the pivotted beams *G* with the pivotted ploughs supported by a pin, when arranged to operate in the manner and for the purpose set forth; and this I claim whether the ploughs be made adjustable, and be raised or lowered, or held by the devices described, or by others accomplishing a similar object by substantially the same means.

No. 30,728.—PETER GIVEN and ELI FOREMAN, of Summer Hill, Pa.—*Improvement in Rotary Harrows*.—Patent dated November 27, 1860.—In the rollers *K* is a groove, as shown at *N*, and when the wheels are turned in a perpendicular position these grooves *N* are in such a position that the cross pieces *F F H H* will enter them at *w k*; these cross pieces then act as braces and also form a bottom of the wagon on which sacks of grain may be laid.

Claim.—The construction of the frame, with the cross pieces *H H F F*, in combination with the sliding bands *G J* and the grooved rollers *K K K K*, constructed as described.

No. 30,729.—W. W. GRAVES, of Fort Adams, Miss.—*Improvement in Cotton Ploughs*.—Patent dated November 27, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The scraping plate *F*, when the same is attached to the end of a long and narrow landside bar *E*, and otherwise arranged, so as to cut and throw the scrapings down into the centre of the furrow, as set forth.

No. 30,730.—JOHN J. HENRY, of North White Creek, N. Y.—*Improvement in Blind Fastenings*.—Patent dated November 27, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The eccentric form of a socket *C*, as described, so that the movements of the bar *B*, after detaching the catch, may press the block *A* which carries the catch apart from the socket *C*, substantially as set forth in the specification.

No. 30,731.—FREDERICK HEYER, of Richmond, Va.—*Improvement in Sewing Machines*.—Patent dated November 27, 1860.—The leading feature of this invention is a device for adjusting the shuttle race to suit shuttles of various sizes.

Claim.—The pivotted levers *R*, operating in combination with the shuttle race *O*, substantially as and for the purposes set forth.

No. 30,732.—J. HOLYLAND and J. C. HOLYLAND, of Rochester, N. Y.—*Improved Cracker Machine*.—Patent dated November 27, 1860.—This improvement relates to the manner of feeding the dough to the cutters and the regulation of the feeding, to compensate for the different degrees of shrinking possessed by different kinds of dough, and the adaptation of the feed to the requirements of different sizes of cutters.

Claim.—Giving an intermittent motion to the pressure rollers *D D*, by means of the clutch and lever *H O*, connecting rod *G*, and crank *F*, or their equivalents, substantially in the manner and for the purposes shown and described.

No. 30,733.—HOSEA HUNTLEY and WILLIAM CAVEN, of Cincinnati, Ohio.—*Improvement in Cooking Stoves*.—Patent dated November 27, 1860.—This invention relates to a peculiar combination and arrangement of fire chambers, air passages, flues, &c., with respect to the oven and boiling places, having for its object the most effective and uniform disposition of heat, for the purposes of cooking.

Claim.—The combination, with the central longitudinal fire box *C*, of supply passages *E e*¹, arranged to receive external air in front and admit it to the fire at the rear, in the manner and for the purposes set forth.

No. 30,734.—HENRY M. JACOBS, of Hartford, Conn.—*Improved Machine for Burnishing Spoons*.—Patent dated November 27, 1860.—This invention relates to an improved double-acting machine for burnishing the bowls of spoons, both inside and outside, and other articles, and consists in a novel method of using and graduating two sets of burnishers at one time.

Claim.—The arrangement of the horizontally sliding and vibrating shafts K K and the transverse travelling and reciprocating toothed ratch F, to actuate the same in combination, in the manner and for the purpose substantially as set forth and described.

No. 30,735.—CHARLES L. JONES, of Richmond, Va., assignor to himself and WILLIAM H. TYREE, of said Richmond.—*Improved Carpenter's Clamp*.—Patent dated November 27, 1860.—This invention consists in the arrangement of a stationary jaw and jaw frame, and a sliding piece provided with oblique slots, in combination with a detachable jaw and a screw.

Claim.—The arrangement of a stationary jaw and jaw frame B B¹ B² B³ and a sliding piece A A², provided with oblique slots A¹, in combination with a detachable jaw G and a screw C, all the parts constructed and operating substantially as and for the purposes set forth.

No. 30,736.—SAMUEL KEEN, of East Bridgewater, Mass.—*Improved Machine for Skiving Leather*.—Patent dated November 27, 1860.—In operating this machine place the end of the piece of leather to be operated upon between the spring M and notched surface of the feed segment N; then, by means of treadle a, revolve the feed segment in the direction of the arrow b; this will cause the leather to be forced against the sharp edge L of the knife and be skived or split, as desired.

Claim.—The application and arrangement of the reciprocating feed segment N O P, substantially as and for the purpose set forth.

No. 30,737.—HIRAM J. LAKE, of Conquest, N. Y.—*Improvement in Cultivators*.—Patent dated November 27, 1860.—The claim and engravings explain the nature of this invention.

Claim.—In combination with a cultivator, the swivelling of the thills thereto, so that they may assume a horizontal position when the cultivator is working on a hillside, for the purpose of relieving the horse from the pressure or gouging of the thills on his sides, and enable the operator to better guide and direct the cultivator as set forth and described.

No. 30,738.—JOSEPH LEEDS, of Philadelphia, Pa.—*Improvement in Hot Air Furnaces*.—Patent dated November 27, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim providing a surface of water over the lowest part or floor of the warm air chamber, and below the heater thereof, substantially in the manner described, and for the purpose specified.

And in combination therewith, I also claim discharging spray or minute jets of water through the rising air in the warm air chamber, substantially as described, and for the purpose specified.

No. 30,739.—ALONZO LIVERMORE, of Fremont, Penn.—*Improvement in Chutes for River or Canal Navigation*.—Patent dated November 27, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim, first, dividing the natural or artificial fall to be overcome in a stream into several smaller falls, in combination with the interposing between said smaller falls of a series of basins, pools, or chambers, substantially as described.

I also claim, in combination with a series of basins, pools, or chambers that are interposed between a series of falls, the current breakers H, for the purpose set forth and explained.

I also claim, in combination with a series of basins, pools, or chambers that are interposed between a series of falls, the lips K K, for retarding the ingress and egress of the water to and from said basins, pools, or chambers, substantially as set forth.

No. 30,740.—THOMAS S. LOCKHART and JOHN A. LOCKHART, of Wellington, Mo.—*Improvement in Ploughs*.—Patent dated November 27, 1860.—This invention consists in the arrangement of a bent rod serving as a standard, a collar fastened to the inside of the mould board, and a curved brace, in combination with the perforations, in the standard and nuts.

Claim.—The arrangement of a bent rod C C¹ C², serving as a standard, a collar I, fastened to the inside of the mould board J, and a curved brace e, in combination with the perforations H H, in the standard and the nuts G G, substantially as and for the purposes set forth.

No. 30,741.—R. G. MATHENY and L. R. BARNES, of De Kalb, Miss.—*Improvement in Ploughs*.—Patent dated November 27, 1860.—This invention consists in a peculiar arrangement of turning ploughs and scrapers.

Claim.—The arrangement of the bars B B, connected with the beam A by the clamps G, in connection with the adjustable feet or standards F F and bars J J, attached to the bars B B, and having the ploughs and scrapers respectively secured to them, the handles C C being attached to the bars B and landsides b b, and all arranged as and for the purpose set forth.

No. 30,742.—THOMAS J. MAYALL, of Roxbury, Mass.—*Improvement in Ordnance.*—Patent dated November 27, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: First, in combination with the swinging frame supporting the cannon, as described, I *claim* transverse braces provided with suitable bearing for so holding the shaft operating the automatic machinery referred to as that its proper relation to said machinery shall not be disturbed by any movement imparted to the cannon, substantially as set forth.

Second. I claim the arrangement of the three levers g h i, relatively to each other, in combination with the studded shaft e, imparting to, and the spring clutch j receiving from, said levers the requisite motions, whereby, at proper intervals of time, the breech is firmly grasped and released, substantially as described, and for the purposes set forth.

Third. I claim arranging, upon one and the same crank shaft at either side of the barrel, connecting rods for operating the devices for automatically loading and swabbing the chambers of the breech, essentially as set forth.

Fourth. I claim the arrangement and application of the several devices for automatically revolving and locking the breech, firing and thumbing its chambers with respect to one common cam shaft, substantially as described, so that the said devices shall all be operated by said cam shaft in perfect unison and with unfailing accuracy, as set forth.

Fifth. I claim the arrangement of springs of equal power, and capable of compression and tension at either end of the platform, whereby the gun, in recoiling, will be acted upon equally and simultaneously at each extremity of the carriage, and be accurately reset in position for the next discharge.

No. 30,743.—C. W. McCLANAHAN, of Victoria, Texas.—*Improvement in Cotton Seed Planters.*—Patent dated November 27, 1860.—In using this machine, as the wheel revolves, the stirrer is reciprocated and the distributor revolved, and the former caused to agitate the seed while the blades of the latter carry the agitated separated seed out through the passage B and into the drill tooth, from whence it falls into the drill formed by said tooth. As fast as the seed is planted it is covered by the coverers H and rolled in by the wheel D.

Claim.—The combination and arrangement of the reciprocating stirrer J t t, rotary distributor I r, crank arms c K L, pitmans M N, pin d, slotted guide plate m n, hopper A, drill tooth F, and coverers H, substantially in the manner and for the purpose described.

No. 30,744.—WILLIAM J. MCCOY, of Cartersville, Ga.—*Improvement in Cultivators.*—Patent dated November 27, 1860.—This invention consists in the arrangement of the different parts of the plough or cultivator.

Claim.—The arrangement of the reversible beam A, stock B, with its braces E C, ploughs F, cutter K, landside j, standard b, handles D, and springs H, substantially as and for the purposes set forth.

No. 30,745.—NELSON MESSENGER, of Newark, Ill.—*Improvement in Cultivators.*—Patent dated November 27, 1860.—This invention consists in the employment of four shoes, which are arranged and applied to the frame and stock of the implement so as to effect the desired end.

Claim.—The arrangement of the horizontal boss G G, with the pendant feet or bars H, having the shares I attached in connection with the standards F, being based by the rods a, and the bars G, braced by the rods D, as and for the purpose set forth.

No. 30,746.—WILLIAM L. MILHOLEN, of Centre, Ala.—*Improvement in Cotton Scrapers.*—Patent dated November 27, 1860.—This invention consists in the arrangement of the parts named in the claim and shown in the engravings.

Claim.—The arrangement of the beam 1, braces 5 5, bolts 6 6, arms 7 and 8, nuts 10 and 11, shares 4 4, hinge joint 9, standard 3, handle 2, as described, for the purpose specified.

No. 30,747.—R. C. MILLINGS, of Charleston, S. C.—*Improved Thill Coupling.*—Patent dated November 27, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Having the goose neck E bent or curved so as to extend around the axle A, at its back, and form a hook to catch against the axle in case of the breaking of the coupling or clip, substantially as set forth.

No. 30,748.—M. H. MOORE and ALEXANDER SATTERWHITE, of Rome, Ga.—*Improvement*

in Cultivators.—Patent dated November 27, 1860.—This invention relates to a new and improved arrangement of means, whereby two ploughs may be readily adjusted nearer to or farther apart, as circumstances may require, and also adjusted so that they may have a greater or less inclination to vary their depth in the earth as may be desired.

Claim.—The arrangement of the bars D D D E E, beam A, and feet F, with the bars G¹ attached, the two latter parts being secured to the bars E E, as and for the purpose set forth.

No. 30,749.—JAMES MORRISON, of Clinton, Me.—*Improvement in Seeding Machines.*—Patent dated November 27, 1860.—This invention consists in the employment of a vibrating spout or trough, a stationary screen, a hopper and shoe, whereby the desired work may be performed.

Claim.—The vibrating spout or trough I, stationary screen H, hopper E, and shoe F, arranged for joint operation, essentially as and for the purpose set forth.

No. 30,750.—J. N. NEFF, of Strasburg, Pa.—*Improvement in Hay and Straw Cutters.*—Patent dated November 27, 1860.—This invention consists in a novel and improved arrangement of a reciprocating knife and feed mechanism.

Claim.—The reciprocating V-shaped knife C, in connection with the feed rollers H I, arranged to operate conjointly, as shown, to wit: the roller I being fitted in loaded bars J J, and the roller H, actuated through the medium of the pawl M, lever N, rod O, and eccentric P, as and for the purpose set forth.

No. 30,751.—JOHN NEIDICH and ELIM R. GIRVIN, of Lancaster County, Pa.—*Improvement in Cultivators.*—Patent dated November 27, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The gauge or guide rod K, with the sliding and binding plates H, set or binding screw I, in combination with the shovels F, and their projecting screw ends *f*, secured on said plates by the nuts *h* for adjustment, when made substantially in the manner and for the purpose specified.

No. 30,752.—OSCAR PADDOCK, of Watertown, N. Y.—*Improvement in Hot Air Furnaces.*—Patent dated November 27, 1860.—The claim and engravings explain the nature of this invention, which is a combination and arrangement of parts.

Claim.—The combination of weighted arm K, connecting rods G and J, and valves C C¹, arranged in the relation to each other and to the door B, herein set forth, and operating substantially in the manner and for the purposes described.

No. 30,753.—WILLIAM PAULI, of Alexandria, Va.—*Improvement in Heaters for Railroad Cars.*—Patent dated November 27, 1860.—The claim and engravings show the nature of this improvement.

Claim.—The arrangement of a heater provided with an upper chamber *c* above the fire box A, side chamber B, smoke pipe E, tubes F, when employed with tubes D D, provided with upper and lower registers and rods *b b*, operating substantially in the manner and for the purpose of heating railroad cars.

No. 30,754.—SEWALL PEARSON, of Boston, Mass.—*Improved Sofa and Bedstead.*—Patent dated November 27, 1860.—This invention has for its object the construction of a neat and cheap article of furniture which may be made to serve the purposes of a bed with a spring bottom and a sofa with a spring bottom, the same to be constructed in such a manner that the use of a sofa as a bed will not injure it in the least, and *vice versa*.

Claim.—The arrangement of the hinged arms D D, back board H, hinged back E, and part B, with the part A, mattress *g*¹, and springs *d d*¹; all as shown and described for the purposes set forth.

No. 30,755.—CHARLES PERLEY, of New York, N. Y.—*Improved Hawser Pipes.*—Patent dated November 27, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The movable cap or shutter applied to the inner end of the hawser pipe and clamped thereto, for the purposes and as specified.

No. 30,756.—JOHN P. PETTIT, of Cold Spring, Ky.—*Improvement in Ploughs.*—Patent dated November 27, 1860.—This invention relates to the class of ploughs in which one or more rollers are employed to take the place of the mould board, for turning the furrow slice, and consists in a peculiar construction and combination of roller, coulter, brace, sole, and landside.

Claim.—The combination of the single conical, flaring roller E, coulter C, sole D, curved

brace F, and bar G; the said parts being constructed and arranged in the manner and for the purposes set forth.

No. 30,757.—H. D. J. PRATT, of Washington, D. C.—*Improved Marine Propeller*.—Patent dated November 27, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the cutwater A, and heel B, or either of them, constructed and applied, substantially in the manner set forth, as a support to the propelling apparatus.

Second. In combination with a propeller hung and operated as described, the stationary vanes I, whether placed on the sides or bottom of the vessel, or at one or both ends of the propeller, or within a cylinder surrounding it, as and for the purpose specified.

Third. Giving to the edges of the stationary vanes an undulating form, the prominences of which pass between prominences of corresponding form on the edges of the propeller vanes, as shown.

No. 30,758.—HARRISON C. RAVENSCRAFT, of Kingwood, Va.—*Improvement in Cultivators*.—Patent dated November 27, 1860.—This invention consists in the arrangement of the several parts.

Claim.—The middle portion A, in combination with the outer sliding rings D and E, arranged and operating as above set forth.

No. 30,759.—FRANCIS RAYMOND, of Sandusky, Ohio.—*Improvement in Rotary Harrows*.—Patent dated November 27, 1860.—This improvement relates to a certain arrangement of devices for the purpose of preventing side draft.

Claim.—The finger P, and roller R, in combination with the adjustable box L, when these several parts are arranged and operate substantially as set forth.

No. 30,760.—JOSEPH S. REEDER, of Canton, Ohio.—*Improvement in Breech Loading and Magazine Fire Arms*.—Patent dated November 27, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, broadly, the vibrating charger K for the purpose of carrying powder to the chambered breech J.

Second. The cut-offs *k* and *k*¹, or their equivalents, for the purpose of retaining the powder in the vibrating charger and in the magazine while the powder is being carried to the chambered breech.

Third. The combination of pinion 12 and rack 11, with levers 10 and 8, for transmitting motion to the vibrating charger K, for the purpose stated.

Fourth. The magazine D, in combination with the vibrating charger K, for the purpose stated.

Fifth. Plate *b*, in combination with piston *r*, as and for the purposes stated.

Sixth. The combination of the hammer 6 with chambered breech S, as and for the purposes stated.

Seventh. The combination of chambered breech J, with barrel C, and vibrating charger K, as and for the purposes described.

Eighth. The vibrating cut-off *a*, or its equivalent, in combination with chambered breech J and ball magazine E, as and for the purposes stated.

Ninth. The combination of lever 2, projection 2¹, with spring catch *j*, and curved projection 4, as and for the purposes described.

Tenth. The combination of trigger protector G with chambered breech J, as and for the purposes described.

Eleventh. The combination of keys *jj* with the side plates B and chambered breech J, as and for the purposes described.

Twelfth. The combination of the removable hand guard with the trigger protector G, as stated.

No. 30,761.—JOHN W. RICHARDSON, of South Braintree, Mass.—*Improved Machine for Cutting Leather*.—Patent dated November 27, 1860.—The nature of this invention is shown by the claim and engravings.

Claim.—An improved leather cutting machine or arrangement of the windlass, its ratchet-retaining spring, connecting rope or ropes, and impelling pawl, with the table, the carriage, the knife frame, knife, and the holding rod, constructed, applied, and made to operate together substantially as and for the purpose specified.

No. 30,762.—A. W. LELAND RIVERS, of Midway, S. C.—*Improvement in Ploughs*.—Patent dated November 27, 1860.—This invention consists of a screw, or wedge bolt *d*, by which the blade of the plough is secured to the standard.

Claim.—The combination of the bolt *d*, slotted metal plate *e*, wedge *i*, and eye *h*; the whole being arranged as described, for the purposes specified.

No. 30,763.—NOAH ROGERS, of Thomas County, Ga.—*Improvement in Cotton Cultivators*.—Patent dated November 27, 1860.—In using this machine for cultivating corn or cotton when small, there is attached to the shovel the scraper O, which, by its curved shape, will catch the ground and prevent it from falling over the young plants, and thus prevent their being covered up.

Claim.—The arrangement of the handles C, standard B, with slot *f*, rung *h*, link *j*, pin *i*, standard D, adjustable braces *g* and *F*, mould board *a*, wings K and *l*, and movable pieces J and J; the whole operating as set forth.

No. 30,764.—GEORGE SCOTT, of Steubenville, Ohio.—*Improved Machine for Raising and Kneading Dough*.—Patent dated November 27, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, a stationary shaft C, having arms or knives D D, and a deflecting flanch or plate E projecting from it, in combination with a revolving dough reservoir H, substantially as and for the purposes set forth.

Second. The combination of the hot water or vapor reservoir J J, dough reservoir H, flanch E, kneading arms or knives D D, substantially as and for the purposes set forth.

No. 30,765.—CHRISTIAN SHARPS, of Philadelphia, Pa.—*Improvement in the Revolving Blocks for Revolving Fire Arms*.—Patent dated November 27, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The breech block B, and detachable cap A, when the latter is so adapted to the former that when the two are fitted together they shall become temporarily a permanent portion of each other, as and for the purpose set forth.

No. 30,766.—FREDERICK SIGRIST, of Napa County, Cal.—*Improved Clevis*.—Patent dated November 27, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Making that end of the clevis A, which is to receive the perforated end of the bolt B, with a hole *b*, closed at the bottom at *d*, for the purpose described.

No. 30,767.—JOSEPH SLOCUM, of Syracuse, N. Y.—*Improvement in Cultivating Harrows*.—Patent dated November 27, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A cultivating harrow composed of the two frames C D, furnished with suitable teeth or plough, the side pieces of which frames are hinged at their ends, and can be spread or contracted at their rear ends, and which are united by a centre beam A I B, composed partially of wood and partially of an arched iron bar, and supported on a pair of wheels; the whole being arranged to operate in the manner and for the purpose set forth and represented.

No. 30,768.—ARNTON SMITH, of Girard, N. Y.—*Improvement in Seed Drills*.—Patent dated November 27, 1860.—To the bar M are made fast the springs O; the lower end of these springs embrace the beams L, and keep them pressed downward with an elastic force, so that when the rolling cutters P, which are rigidly secured by their carriers Q to the seed tubes and ploughs J K, chance to come in contact with a stone or other obstruction too hard to be cut by them, the seed tubes and ploughs may be free to rise and be carried safely by the rolling of the cutter over and past such obstruction.

Claim.—In combination with the seed tubes J J J, and ploughs K K K, I claim the arrangement of the rolling cutters P P P, and springs O O O, when used in connection with the sliding bar M, bolt rods U, and elevator R, in the manner substantially as and for the purpose set forth.

No. 30,769.—ISAAC SMITH, of Albany, N. Y.—*Improvement in Stove Grates*.—Patent dated November 27, 1860.—This improvement consists in the manner of moving, or tumbling, the grate from end to end, so as to clear the coals from the ashes.

Claim.—The combination of the grate, bed, and plate hinge, as described, for the purposes set forth.

No. 30,770.—DANIEL E. SOMES, of Biddeford, Me.—*Improvement in the Construction of Buildings for Packing Meats*.—Patent dated November 27, 1860.—The claim and engraving explain the nature of this invention.

Claim.—Constructing a building whose walls and roof include hollow air spaces, arranged substantially in the manner and for the purpose set forth.

No. 30,771.—L. STEVENS, of Dover, Ky.—*Improvement in Cultivators*.—Patent dated November 27, 1860.—This invention consists in the use of revolving toothed shafts and a share

arranged in a novel way, so as to be adjustable and applied to a frame provided with a driving wheel, from which the toothed shafts are driven.

Claim.—The adjustable revolving toothed shafts E E, in connection with the adjustable plough L; all being arranged essentially as and for the purpose set forth.

No. 30,772.—NELSON P. STRATTON, of Nashua, N. H.—*Improved Method of Winding Watches.*—Patent dated November 27, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the winding barrel *a*, with the winding arbor C attached thereto, in connection with the retaining ratch D, spring S, main gear wheel E, and stationary hub *c*, the outer end of the main spring B being attached to the barrel *a*, and the inner end 3 to the stationary hub *c*, or its equivalent.

Second. I claim attaching the hub *c*, or its equivalent, to the frame of the watch, in combination with the winding barrel, maintaining ratch, and main gear wheel.

Third. I claim the application of the maintaining power directly to the winding barrel, substantially in the manner specified.

No. 30,773.—HENRY G. STREET, of Liberty, Miss.—*Improvement in Cotton Cultivators.*—Patent dated November 27, 1860.—This invention consists in the arrangement of devices.

Claim.—The arrangement of the beam A, handles C C, standards B and E, bar D, share or point *b*, and scraper F, with its curve *f*, the whole being constructed in the manner and for the purposes described.

No. 30,774.—GEORGE C. TAFT, of Worcester, Mass.—*Improvement in Drill Frames.*—Patent dated November 27, 1860.—The claim and engravings explain the nature of this invention.

Claim.—As an improved article of manufacture, a portable drill frame, in which parts A B C G G are all cast in one piece, in combination with coring out the parts A and B.

No. 30,775.—JOHN G. TAYLOR, of Philadelphia, Pa.—*Improved Breast Collar for Horses.*—Patent dated November 27, 1860.—This invention consists in making the arch A and its two plates in separate parts, connected together by means of hinge joints, which, when the usual padded tug straps are secured to the said plates, the collar will readily yield at the said joints, so as to adjust itself to fit properly the shoulders of different sized horses.

Claim.—A breast collar having the projecting metallic arch or bow A articulated or jointed to the tugs B B, substantially in the manner described, and for the purposes set forth.

No. 30,776.—DANIEL E. TEAL, of Norwich, N. Y.—*Improvement in Apparatus for Drawing Water.*—Patent dated November 27, 1860.—This invention relates to a combined stop and brake mechanism, applied to the windlass in such a way that both may be actuated by manipulating the crank, or without taking the band therefrom.

Claim.—The employment of the brake and pawl lifter F G, in combination with the crank D, ratchet C, and drum B, as shown and described for the purposes set forth.

No. 30,777.—CHARLES THURBER, of Brooklyn, N. Y.—*Improvement in Caligraphs.*—Patent dated November 27, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the combination of the means, or the equivalent thereof, for giving the tablet a movement in the direction of the lines to be written, with the means, or equivalent thereof, for giving it a movement at right angles thereto, substantially as and for the purpose specified.

I also claim the tracer and pen, with their connecting mechanism, substantially as described, in combination with the ink cup and guard plate, having a hole into which the tracer is to be inserted, as a guide to insure the entrance of the pen in the ink cup and to protect the point of the pen, substantially as described.

I also claim, in combination with the tracer and pen and their connecting mechanism, substantially as described, connecting the ink cup with the movable plate on which the point of the tracer acts by a free lever, or the equivalent thereof, to enable the writer to regulate the dip of the pen in the ink, as described.

I also claim connecting and combining the pen with the mechanism operated by the tracer, by means of a rocking or vibrating arm and interposed spring, substantially as and for the purpose described.

And, finally, I claim connecting the writing and the inking apparatus with the frame on which the tablet moves by means of a swivelling or turning frame, substantially as described, and for the purpose set forth.

No. 30,778.—J. B. VAN DEUSEN, of New York, N. Y.—*Improvement in Sounding Appa-*

ratus.—Patent dated November 27, 1860.—The claim and engravings explain the nature of this invention.

Claim.—So combining the screw F with the registering and indicating mechanism that, during the descent of the apparatus through the water, the said screw is kept in gear with the said mechanism by the resistance of the water to its descent, but that when the apparatus touches bottom the said screw drops out of gear, and that as the apparatus is drawn up the said screw is kept out of gear with the said mechanism, and permitted to revolve freely without affecting the said mechanism, substantially as described.

No. 30,779.—SMITH R. WARNER, of London, Ohio.—*Improvement in Seeding Machines.*—Patent dated November 27, 1860.—This invention consists in constructing the several parts of the machine.

Claim.—The arrangement of the frames A and B, the one hinged upon top of the other, the seed boxes F, the seed slides I, the discharge spouts G, the valves Q, the levers M and N, and the ploughs S S, the several parts being constructed and arranged as and for the purpose specified.

No. 30,780.—O. H. WOODWORTH, of Upper Marlborough, Md.—*Improvement in Fences.*—Patent dated November 27, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Uniting the panels of portable fences by means of the reversed wedge-shaped or alternate scurf joints, in connection with the jaws of the bracket or brace, to securely hold the joints A together, substantially as described.

No. 30,781.—SELIM E. WOODWORTH and JAMES S. WETHERED, of San Francisco, Cal.—*Improved Amalgamator.*—Patent dated November 27, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim*, first, the combination of steam pipes *k* with the hollow shafts I, of the scrapers S, and drag frames C, of the amalgamating and separating pans, for the purpose of introducing steam into said pans, all the parts constructed and operating in the manner described.

Second. The arrangement of a swinging frame H, adjusting wedges R, and ball joints G, in combination with the pan E of an amalgamating and separating apparatus, all the parts constructed and operating in the manner described.

Third. The sliding sleeves *e*¹, of the side discharge pipes *e*, of the pan E, in combination with swinging pans B B, so that the said sleeves may be moved back out of the way of the edges of the pans B B when the latter or either of them are to be tilted, the whole constructed as described.

No. 30,782.—JOHN WRIGHT, of Sheffield, England.—*Improvement in Rolling Steel and Iron Wire.*—Patent dated November 27, 1860.—This invention consists in winding the wire to be reduced on an iron bobbin or reel, which is then placed in a box of the same metal and the whole placed in a furnace and heated to the required degree; after heating, the box and wire together are placed in close proximity to the rolls by which the wire is to be reduced.

Claim.—The employment, substantially as described, in the heating and rolling of wire or other long lengths of steel and iron, of a box or chamber B and a bobbin or reel A, combined substantially as set forth.

No. 30,783.—JOHN N. WYCKOFF, of Brooklyn, N. Y., and THOMAS M. FELL, of Melvin Mines, Va.—*Improved Amalgamator.*—Patent dated November 27, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The application of steam internally in jets through stirrers or frames G G placed in a vessel B containing the pulp and mercury, substantially as and for the purpose set forth.

No. 30,784.—GEORGE C. BOVEY, of Chillicothe, Ohio, assignor to himself and D. C. RUGGLES, of Cincinnati, Ohio.—*Improvement in Farm Gates.*—Patent dated November 27, 1860.—The operation by which the gate is traversed is such that, by the pressure of the wheels of a vehicle upon the levers *a*, which are firmly fixed upon a shaft, being the extension of the levers *b*, these levers, in connection with the levers *d* and *n*, with the rack and pinion *f*, serve to open and shut the gate, while the bar *c* is brought forward so that the latch *m* catches upon it to hold the gate firmly when opened.

The inventor says: I do not claim broadly the use of the levers and rack and pinion for operating the gate, but I *claim* their arrangement when used in connection with the catch *m* and bar *c*, for holding the gate firmly when open, all as set forth, for the purposes described.

No. 30,785.—WILLIAM S. BULLEN, of Indianapolis, Ind., assignor to himself and STEPHEN

A. CLARK, of said Indianapolis.—*Improved Machine for Creasing*.—Patent dated November 27, 1860.—This invention consists in substituting chased rotary disks of metal for the creasing tool, and so operating said disks as to make the whole design at one passage over the leather by the simple process of turning a crank.

Claim.—The combination and arrangement of a series of creasing disks E upon and with spool or thimble I, when these are made to revolve upon the axle J, substantially as and for the purposes designated.

No. 30,786.—JACOB R. BYLER, of Salisbury, Pa., assignor to himself and HUGH W. BLACK, of Lancaster County, Pa.—*Improvement in Rakes for Reaping Machines*.—Patent dated November 27, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim, first, the combined vertical and horizontal tripper D C and arm E, in combination with the peculiarly slotted shifting lever H, for operating the up and down motion of the rake.

Second. I also claim the sliding and turning rocker shaft B², in combination with the cross-head base S and independent crank lever O and connecting rod N, together with the grooved guides F F and clipper ridge f, combined and arranged substantially as set forth, for the purpose specified.

No. 30,787.—FRANCIS D. HAYWARD, of Malden, Mass., assignor to himself and DANIEL E. HAYWARD, of said Malden.—*Improvement in the Mode of Holding Sockets of Moulds during the Vulcanization of Caoutchouc*.—Patent dated November 27, 1860.—This invention consists in a convenient method of holding the piece of metal around which the rubber is to be vulcanized securely in place in the mould during the moulding and vulcanizing of the rubber.

Claim.—The method described of holding the metal socket or other article around which the rubber is to be moulded and vulcanized securely in the mould, as set forth.

No. 30,788.—RICHARD MARTIN, of Philadelphia, Pa., assignor to himself and ALEXANDER PRIESTLEY, of said Philadelphia.—*Improvement in Machines for Damping Paper*.—Patent dated November 27, 1860.—This invention consists of a revolving roller having a series of longitudinal grooves, in combination with two plain rollers and a trough containing water.

Claim.—The revolving roller D having a series of longitudinal ribs x, with intervening flutes or grooves, in combination with the trough B and the rollers G and C, the whole being arranged substantially as set forth, and applied to the damping of paper as specified.

No. 30,789.—JAMES TEMPLE, of Bellefonte, Pa., assignor to JOSEPH KEYSER, of Philadelphia, Pa.—*Improvement in Harrows*.—Patent dated November 27, 1860.—The claim and engravings explain the nature of this invention.

Claim.—In combination with the adjustable supporting wheels or rollers E, the hinged levers F F, for adjusting the height of the harrow teeth, and raising and lowering either end of the harrow to pass obstructions, substantially in the manner and for the purpose described.

No. 30,790.—WILLIAM S. WILLIAMS, of New York, N. Y., assignor to himself and THOMAS J. O'CONNOR, of said New York.—*Improvement in Machines for Bundling Kindling Wood*.—Patent dated November 27, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim, first, a wood carrier A, formed with several receptacles, into which the wood is packed as set forth, and from which it is delivered to be compressed into a bundle.

Second. I claim the slides a and c to deliver the wood into the trough, and convey the same to the compressing part of the machine, as set forth.

Third. I claim the opening d¹ at the end of the trough b, for the purposes set forth.

Fourth. I claim the inclined side e at the end of the trough, for the purposes and as specified.

Fifth. I claim the shield 2 attached to the follower f, for the purposes set forth.

Sixth. I claim the jaw i, formed and acting as set forth, to receive, hold, and twist the wire that surrounds the bundle, as specified.

No. 30,791.—SOLOMON H. APPLE, BENJAMIN LINDHEIM, and HENRY BAER, of New York, N. Y.—*Improved Apparatus for Shaping Hats*.—Patent dated December 4, 1860.—This invention consists of moving half rings combined with curved dies; said half rings acting to curb the brim of the hat over the upper die, and press the same into shape.

Claim.—The sliding half rings g g, fitting and acting substantially as specified, in combination with the curved parts l of the die c, as and for the purposes specified.

No. 30,792.—ROBERT C. BAILEY, of Greensboro', N. C. *Improvement in Machines for*

Ramming Earth Around Railroad Cross Ties.—Patent dated December 4, 1860.—The object of this invention is to combine with a machine which may be moved about on railroad rails, two reciprocating spring rams, which are operated by gearing, for the purpose of ramming earth about the cross ties of railroad rails in a more rapid and efficient manner than can be done by the means hitherto employed.

Claim.—Combining with a movable truck frame A and D the reciprocating rammers E E, as set forth, when the same are actuated by the gearing J J and H H, and the springs a a, substantially as described.

No. 30,793.—EVERETT BASS, of Pachitta, Ga.—*Improvement in Ploughs.*—Patent dated December 4, 1860.—This invention consists in the arrangement of the parts.

Claim.—The arrangement of the forked and slotted adjustable bar D, beam A, band E, and hinged serrated adjusting rod d, with the guide bar G, all as shown and described for the purposes set forth.

No. 30,794.—LOUIS BAUHOEFER, of Philadelphia, Pa.—*Improved Life Preserving Mattress.* Patent dated December 4, 1860.—This invention consists in the arrangement and combination of an outer frame, an inner frame with a cover of net work, and an additional cover of oiled canvas, or other equivalent water proof material, and a packing of cork cuttings or shavings, and a system of transverse and longitudinal ropes; the whole so constructed as to form a convenient mattress or life preserver.

Claim.—The arrangement and combination of the outer frame A, inner frame C, net work cover h¹, the cover d, of oiled canvas or other equivalent water proof material, the packing of cork cuttings or shavings, and the longitudinal and transverse ropes, the whole being constructed as set forth, for the purpose specified.

No. 30,795.—MICHAEL L. BAUDER, of Cleveland, Ohio.—*Improvement in Rotary Harrows.*—Patent dated December 4, 1860.—This invention consists in the peculiar arrangement and construction of rotary harrows provided with triangular teeth.

Claim.—The triangular teeth D E, frame A, draught beam C, axle B, and plates H I K, when the whole is constructed and arranged for operation conjointly, as and for the purpose set forth.

No. 30,796.—HIRAM M. BELDEN, of Farmington, Ohio.—*Improvement in Cultivators.*—Patent dated December 4, 1860.—This invention consists in forming the frame of a single piece of flat iron.

Claim.—The frame A composed of a single iron bar, bent in the form as and for the purpose set forth.

No. 30,797.—JOHN BLOCHER, of Williamsville, N. Y.—*Improved Chain.*—Patent dated December 4, 1860.—This invention consists in the combination of the knee of one knife-edged link with the slot of another knife-edged link, for the purpose of forming a chain the links of which cannot detach themselves from each other.

Claim.—The combination of the knee D D¹ of one knife-edged link B B¹ with a slot C of another knife-edged link A A¹, for the purpose of forming a chain the links of which cannot detach themselves from each other, substantially as set forth.

No. 30,798.—GEORGE BUCHANAN, of Hickory, Pa.—*Improved Compensating Pendulum.*—Patent dated December 4, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The continuation of the pendulum wire to a point above the axis of oscillation, there forming a bow, thence descending through a fixed plate, or its equivalent, to a fixed block below on a lever with the pendulum ball, substantially in the manner and for the purpose specified.

No. 30,799.—W. R. CENTER, of Athens, Ga.—*Improvement in Corn Planters.*—Patent dated December 4, 1860.—This invention consists in the arrangement of parts.

Claim.—The arrangement of the guard F, coverers G, plough E, and roller H, with the seed box D, slide b, beam A, lever J, spring J¹, rods K g, bent lever L, and handles B, all as shown and described, for the purposes set forth.

No. 30,800.—SAMUEL S. CHANDLER, of Chelsea, Mass.—*Improvement in the Striking Mechanism of Gongs.*—Patent dated December 4, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of spring k, the peculiarly shaped latch piece n, slotted guide j, and the guide i, when combined and made to operate with the pawl m, spring d, hammer c, and stop f, of a gong or bell striking apparatus, in the manner substantially as described.

No. 30,801.—EDWIN C. CLEVELAND, of Worcester, Mass.—*Improvement in Machines for Stretching Cloth*.—Patent dated December 4, 1860.—This invention consists in the arrangement of parts.

Claim.—The arrangement of the slotted sleeves C C, and screws g g, with the blocks D, stretching rollers B B, and shaft A, as and for the purpose set forth and described.

No. 30,802.—GEORGE J. COLBY, of Waterbury, Vt.—*Improved Clothes' Wringer*.—Patent dated December 4, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The construction of the clothes' wringer with tanks E E, pivotted arms I I, and rollers J C, or their equivalents, arranged so that the act of passing the clothes between the rollers will cause the device to clamp itself firmly to the tub or other article, substantially as shown and described.

No. 30,803.—CHARLES M. DABOLL, of New London, Conn.—*Improved Pressure Gauge*.—Patent dated December 4, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the rock shaft l, and its toes p m, the lifter i, and its guide rod j, and spring n, and the rod h, connecting the said lifter with the sector H, which gears with the pinion on the index shaft, the whole being applied and arranged in combination with the diaphragm and index, substantially as specified.

No. 30,804.—BYRON DENSMORE, of Brockport, N. Y.—*Improved Feathering Paddle Wheel*.—Patent dated December 4, 1860.—The nature of these improvements is shown by the claim and engravings.

The inventor says: I *claim* the eccentric wheel with its radiating arms, and the attachment to the buckets sliding on the arms, substantially as and for the purposes described.

Also, in combination with the above, the arrangement of the friction rollers with the eccentric wheel, by which the wheel is supported, substantially as and for the purposes described.

Also, the connection of the buckets and paddle arms by the two series of brackets and hinges, substantially as and for the purposes described, used in a feathering paddle wheel, substantially as described.

No. 30,805.—C. H. EDWARDS, of Vergennes, Vt.—*Improved Tuyere*.—Patent dated December 4, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the employment or use of the ball E, attached to a suitable shaft F, provided with openings or passages, one or more, which extend entirely through it, and placed in the relation with the bed or plate B, and wind chamber D, as shown, to operate as and for the purpose set forth.

I further claim arranging the shaft F, of the ball E, in such a way that a weight G, may be placed on said shaft to operate as and for the purpose specified.

No. 30,806.—THOMAS EVANS, of Watkins, N. Y.—*Improvement in Wiring Tin Cans*.—Patent dated December 4, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The described method of strengthening and improving tin cans and other articles formed of sheet metal, by turning the wire upon the inside of the top, whereby the outer surface is left on a plane with the body or neck thereof, substantially in the manner and for the purposes set forth.

No. 30,807.—OSCAR FALKE, of College Point, N. Y., and A. C. RICHARD, of Newtown, Conn.—*Improvement in Vulcanizing Caoutchouc*.—Patent dated December 4, 1860.—The claim explains the nature of this invention.

Claim.—The use of the combination of the sulphuret of antimony and sulphate of soda, for the purpose of vulcanizing caoutchouc, gutta percha, and other vulcanizable gums, substantially in the manner described.

No. 30,808.—W. V. GEE, of New Haven, Ct.—*Improvement in Machinery for Turning Bags*.—Patent dated December 4, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, a machine for turning bags, composed of or containing the following three principal elements, viz: First. A device for opening the mouth of the bag; second, a device for extending and keeping extended the mouth of the bag; third, a device for entering and seizing the bottom while the mouth is extended, and drawing the bottom through the entire length of the bag; the whole operating in combination with each other, substantially as described.

Second. The use of smootheners, applied and operating substantially as described, in

combination with the devices for extending the mouth and the device for drawing the bottom through the interior of the bag, for the purpose of taking the wrinkles out of the bag as it is turned.

Third. The arrangement of the nipper frame G, and the nippers *c d c d*, in combination with the rising table B, and the plate F, substantially as described.

Fourth. The arrangement of the extender bar N, and extenders P P, to operate in combination with the nipper frame G, and nippers *c d c d*, substantially as specified.

Fifth. The arrangement of the turning grippers *l m l m*, to operate in combination with the extender bar N, and extenders P P, substantially as set forth.

Sixth. The plate E, applied in combination with the turning grippers, substantially as and for the purpose set forth.

Seventh. The wedges V V, applied in combination with the wiring grippers, substantially as and for the purpose set forth.

No. 30,809.—JOHN GILLELAND, of Athens, Ga.—*Improved Mode of Blasting Rocks*.—Patent dated December 4, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Blasting rocks by having the hole which receives the charge of two different diameters, the smaller one *b*, to receive the powder, and the larger one *a*, to receive the wadding, and using in connection therewith a plate C, and spindle D, respectively applied and manipulated, substantially as set forth.

No. 30,810.—N. A. H. GODDIN, of Wilson, N. C.—*Improvement in Cotton Cultivators*.—Patent dated December 4, 1860.—When this invention is all put together, it forms a large double-winged turning shovel; by taking off the wings G and H, it is a plain straight shovel plough; by removing the corner pieces I and J, it is a narrow shovel-nosed pointed digger; by removing them and replacing the piece J and wing H, it is converted into a left hand turning shovel.

Claim.—The combination of the curved triangular plate E, or plate F, with the main casting D, pieces I J, and wings G H, substantially as and for the purposes set forth.

No. 30,811.—EDMUND GREENLEE, of Summer Hill, Pa.—*Improved Machine for Finishing the Inside of Barrels*.—Patent dated December 4, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Having a mandrel so as to admit of a rest through the inside, with tools to howel, bevel, cut the croze, and turn the inside, in the manner described, or any other substantially the same, and which produces the same result.

No. 30,812.—WILLIAM D. GRIMSHAW, of New York, N. Y.—*Improved Mangle*.—Patent dated December 4, 1860.—This invention consists in the combination of three rollers, the upper one being stationary, the lower one pressed up by a spring weight, or similar device, and connected by a hinged table, the centre roller being removable, and having the goods to be mangled wound thereon.

Claim.—Combination of the rollers P F and D, and table E, when the parts arranged and operate in the manner and for the purposes specified.

No. 30,813.—JOHN S. HALL, of Manchester, Pa.—*Improvement in Plough Clevises*.—Patent dated December 4, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The making of a clevis by bending down and around the piece of metal, so as to enclose and rigidly hold a strengthening plate in its bends or folds, substantially as described.

No. 30,814.—ORIGIN HALL and G. HALL, of Willington, Ct.—*Improvement in Machines for Dressing Thread*.—Patent dated December 4, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We claim, first, an automatic apparatus, substantially such as described, for traversing thread, in combination with rotating polishing felt clothed cylinders, or their equivalents, and with a size vat, when so arranged, substantially as specified, that each thread passes singly over the polishers, so that threads may be sized, traversed, and polished, substantially in the manner described.

Second. We claim, in combination with a size vat, and with rotating polishers, substantially such as described, an automatic apparatus, substantially such as specified, for imparting to the thread a combined traversing and rolling motion.

Third. We claim, in combination with rotating polishers, substantially such as described, a combined apparatus, substantially such as described, one part of which gives to the thread a traversing motion, and the other part of which imparts to the thread a combined rolling and traversing motion, substantially in the manner specified.

No. 30,815.—JOHN HARDICK and CHARLES B. HARDICK, of Brooklyn, N. Y.—*Improvement*

in *Valves*.—Patent dated December 4, 1860.—This invention consists of a three-armed valve, so arranged, in connection with the eduction and induction parts, that the pressure itself will insure the completion of the movement.

Claim.—The valve *f*, provided with wings 1 2 and 3, and arranged relatively to the ports *e d d*¹ and *e*, and operating substantially as and for the purposes specified.

No. 30,816.—R. E. HARTE, of Marietta, Ohio.—*Improved Ellipsograph*.—Patent dated December 4, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the construction and arrangement of a drawing instrument, having the ruler or rulers, or parts designed for holding or directing the pencil, attached by means of a universal joint, or joints, or pivots equivalent thereto, to a bar which is movable around and along a rod or spindle held at any required angle to the plane surface upon which the drawing is to be made, and also the combination therewith of the joint or pivot *g*, the adjustable stem *F*, the indices *g*⁴ and *h*⁶, the graduated tangent bar *J*, and protractor *L*, constructed and operating substantially as described, and for the purposes set forth.

No. 30,817.—GEORGE W. HATHAWAY, of Tioga, Pa.—*Improvement in Feed Cutters*.—Patent dated December 4, 1860.—By bearing down the arm *d* the spring *s* is compressed, and its inclination to recover its natural position, together with the extra weight on that side of the rock shaft *f*, causes the pawl *l* to drop down the instant the arm *d* is relieved by the passing pin *a*. The arm *d* is so connected with the rock shaft *f* as to be turned up without turning the said shaft, by means of which the parts would not be broken if the wheel should happen to turn backwards.

The inventor says: I *claim*, first, the combination, in the manner specified, of the roller *h*, and adjustable arch *g*, with the knives *k*, arranged and operated as set forth.

Second. The combination of the rock shaft *f*, its arm *d*, head *m*, spring *s*, and pawl *l*, with the cam *n*; they all being constructed, arranged, and operating in the manner and for the purpose specified.

No. 30,818.—JOHN HAVEN, of Boston, Mass.—*Improvement in Insect Shields for the Head*.—Patent dated December 4, 1860.—This invention consists in a new article for mosquito nets, of any suitable material, which is impenetrable by insects and perfectly pervious to air, in combination with a suitable sustaining and elastic frame work.

Claim.—The described mosquito guard, constructed to operate as described and for the purposes explained.

No. 30,819.—JOHN P. HAYES, of Hennepin, Ill.—*Improvement in Excavators*.—Patent dated December 4, 1860.—The inventor says: I construct my plough of wood, in a triangular form and of sufficient size to form the channel of the desired width; on the outside I attach the mould board and shares of the ploughs bolted to the frame; the same is propelled by a common steamboat in front of the same, by rods attached to the boat and plough, to be arranged so as to be manageable by an individual standing on the bow of the boat, and elevated or depressed at pleasure.

Claim.—The manner of suspending, adjusting, attaching, and propelling plough, driven by steam, and used in the bed of rivers, for the purpose of removing sand bars therefrom.

No. 30,820.—HENRY ST. J. HILSMAN, of Madison, Ga.—*Improved Peach Parer and Cutter*.—Patent dated December 4, 1860.—This invention consists in the employment of the double knife, and also in the combination and arrangement of the different devices.

The inventor says: I *claim*, first, the double knife *G*, the same being constructed and operated substantially as and for the purpose set forth.

Second. I claim the arrangement of a slide *a*, serrated spring *f*, holders *d* and *e*, and spring *g*, when all shall be used conjointly in the manner described.

No. 30,821.—SAMUEL F. HODGE, of Detroit, Mich.—*Improvement in Stamping Mills for Crushing Quartz*.—Patent dated December 4, 1860.—This invention relates to a new means employed for elevating the plunger or pestle and liberating the same at the desired point.

Claim.—The combination of the eccentric cams *H H*, wedge or V-shaped frame *E*, and stamper shaft *D*, the whole being constructed substantially as and for the purposes set forth.

No. 30,822.—SAMUEL F. HODGE, of Detroit, Mich.—*Improvement in Machines for Breaking Quartz, Rock, &c.*—Patent dated December 4, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, operating or elevating the pestle rod *D* through the medium of the wheels or rollers *H H*¹, the former one (*H*) being on a stationary rotating shaft

E, and the latter (H^1) on an adjustable shaft I, which is actuated by means of a lever M, with any convenient power applied to it, in connection with the springs J J^1 , or their equivalents.

Second. The construction of the mortar R with a central receiving hopper a^* , anvil T, and descending discharge ports c^* , in combination with a pestle S, working within the hopper a^* , and operating, in connection with the anvil T and discharge ports c^* , substantially as and for the purposes set forth.

No. 30,823.—GEORGE HUNZINGER, of Brooklyn, N. Y.—*Improved Extension Table*.—Patent dated December 4, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, constructing the leaves of an extension table so as to slide out horizontally from the centre and stationary part of the table, as the ends of the said table are extended, substantially as specified.

Second. I claim the arrangement of the cross screw d and arms e^1 , combined with the cross pieces $k k$, whereby the act of extending the table elevates the leaves ready to be drawn off, as set forth.

Third. I claim the arrangement of the centre table top l , spring m , and wedges $12\ 12$, in the manner and for the purposes set forth.

Fourth. I claim the arrangement of the cross screw d , nuts $e e$, and cross bars $f f$, in connection with the guide bars $g^1 g^1$ that preserve the parallelism of the table in its extension or contraction, as set forth.

No. 30,824.—HEZEKIAH CONANT, of Willimantic, and LAWSON C. IVES, of Hartford, Conn.—*Improvement in Machines for Dressing Thread*.—Patent dated December 4, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim*, first, in combination with a size vat, swinging wipers for making tension and laying fibre, substantially such as described, and this we also claim when the wipers are fitted with adjustable weights, substantially as specified.

Second. We claim, in combination with a size vat and a rapidly rotating brush and nippers, or any proper device for preventing the too rapid withdrawal of thread, a constant take-up motion, consisting of friction rollers, or their equivalents, from which thread passes on to the bobbins, or their equivalents, substantially as specified.

Third. We claim, in combination, when arranged in the order described—First. A vat for size; Second. Nippers or wipers, or their equivalents, for removing surplus size and laying fibre; Third. A steam apparatus, or any equivalent thereof, for the purpose of drying size; and, Fourth. A rapidly revolving brush; all acting in combination, under a mode of operation substantially such as is described; and we also claim these four elements or parts of a whole apparatus, arranged in the order as described, in combination with a traverse apparatus and a constant take-up motion, or either of them.

No. 30,825.—J. B. JOHNSON, of Boston, Mass., assignor to JOHN SPARROW, of Portland, Me.—*Improvement in Pumps*.—Patent dated December 4, 1860.—The claim and engravings show the nature of these improvements.

The inventor says: I *claim* having the outside cylinder divided into three compartments G G F, separated by the abutments D D^1 , which entirely surrounds the moving barrel A, as shown and described, so that the said cylinder A will work in equilibrio.

I also claim the extension of the moving barrel A beyond its outer cylinder, so that said cylinder may be operated by the application of proper force to said exterior end, all as shown and described.

I also claim the arrangement of the chamber N directly over the suction chamber F, so as to conduct the water in a direct line to the vacuum chamber, all as shown and described.

I also claim the combination of the barrel A with the valve rod R, as shown and described, so that the same eccentric that drives the slide valve will also operate the barrel A, all as set forth.

I also claim the employment, within the moving barrel, of the stationary piston head J, when constructed and operating as and for the purpose shown and described.

No. 30,826.—L. W. LANGDON, of Northampton, Mass.—*Improvement in Valves for Oscillating Engines*.—Patent dated December 4, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the combination of a valve r with passages $i i^1$ and $j j^1$, arranged so as to operate interchangeably, simply by altering the position of r , to conduct either full or exhaust steam, substantially as described, for the purpose of changing the direction of the rotation of the crank.

Also, the combination of the flange l , when it is made to oscillate with the cylinder, with the stationary chest f , having ports $i i^1 j j^1$, substantially as described, operating to relieve the cylinder and chest joints from lateral pressure.

No. 30,827.—THOMAS MAHONEY, of Knoxville, Tenn.—*Improvement in Slide Valves*.—Patent dated December 4, 1860.—This invention consists of a partially screw-threaded valve rod, partially screw-threaded tube and clamp nut, in combination with the steam chest and sliding valve of a steam engine.

Claim.—The screw-threaded sleeves or elongated nut F, operating in connection with the valve B, valve rod D, and stuffing box G, substantially as and for the purpose set forth.

No. 30,828.—EBENEZER MATHERS, of Fairmount, Va.—*Improvement in Fountain Pens*.—Patent dated December 4, 1860.—The claim and engravings show the nature of this invention.

Claim.—The use of a hair pencil brush, or other similar arrangement of hair, in contact with a metallic or other writing pen, for the purpose of securing a continuous and spontaneous flow of ink to the pen while writing, arranged and operating in the manner as above, substantially as set forth.

No. 30,829.—ANSEL D. MERRITT and CORNELIUS KEMPLER, of Woodstock, Ill.—*Improvement in Supplying Locomotive Engines with Water*.—Patent dated December 4, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The employment of the inverted truck D, placed beneath the truck and made adjustable, as described, by means of which truck the engine drivers are raised from the rails, as and for the purpose specified, substantially as described.

No. 30,830.—JOHN H. MORSE, of Peoria, Ill.—*Improved Combination Lock*.—Patent dated December 4, 1860.—This improvement consists in placing upon an arbor K, within the frame of the lock, one or more slotted wheels E, the slots being filled with balls lettered *x*, and so arranged that the revolving of the knob A will turn the wheels, and a slot being made at the pleasure of the operator by withdrawing the slide B, which is so arranged as to take effect on any one of the balls *x*, and remove it to the position indicated by the dotted line *e*, thus forming a slot and permitting a lug *c* to enter it, and in the act of entering releases the bolt, the dial *m* always showing the position of the slot to the person making it.

Claim.—The balls *x*, or their equivalent, in connection with the slotted wheel E, and slide B, working in the manner and for the purpose specified.

No. 30,831.—ANDREW MURTAUGH, of New York, N. Y.—*Improved Dumb Waiter*.—Patent dated December 4, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim the arrangement of the rope *a*, and cord *d*, in combination with the dumb waiter B, and tightening arbor *m*¹, constructed and operating as and for the purpose described.

I also claim the arrangement of the spring dog *m*, to operate in combination with the weight G, and cord *d*, substantially in the manner and for the purpose described.

And I further claim the arrangement of two or more pulleys *f*, on the top, and two or more pulleys *i*, on the bottom of the dumb waiter B, said pulleys being placed in a position at right angles to each other, in the manner described, to operate in combination with the cord *d*, and rope *a*, substantially as and for the purpose specified.

No. 30,832.—FANTLEY H. NAYLOR and ARMSTRID WARD, of Niles Township, Ind.—*Improvement in Seeding Machines*.—Patent dated December 4, 1860.—This invention consists in the peculiar construction, arrangement, and combination of the seed planter and roller.

Claim.—The arrangement and combination of the above described drill roller and planter; the whole being constructed and operating substantially as set forth.

No. 30,833.—THOMAS L. NICKOLS, of Alexandria, Va.—*Improvement in Constructing Railroad Car Frames with Metallic Joints*.—Patent dated December 4, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Connecting the sills, bolsters, joints, and cross pieces of a locomotive car body or truck frame by metallic joints and bearings, to save the mortising and consequent weakening of said timbers, as described and represented, said bearings having, as their general characteristics, horizontal flanges on top to catch over the pieces with which they are to connect, horizontal ledges below to support the vertical strain and vertical grooves or gains in their sides to prevent lateral movement, and for the purposes set forth.

No. 30,834.—JOHN GEORGE POPP, of Vienna, Austria.—*Improvement in Medicated Lotions*.—Patent dated December 4, 1860.—This invention is composed of half ounce, each, of spoon root, grape vine root, sage, rose leaves, pellitory, Peruvian bark, abrotænum, and horse radish; all this is mixed with sixteen ounces of alcohol, and a like quantity of pure water,

and to be left standing two weeks in a warm place; it is then mixed with one ounce of anatherin root and one ounce of cloves and left standing two weeks more. It is poured off and filtered, and mixed with one ounce of the tincture of myrrh and one ounce of the tincture of guaiacum.

Claim.—The employment or use of the composition which I term “anatherin water,” and which consists of the described ingredients mixed together in about the proportion and for the purpose specified.

No. 30,835.—ADAM PRITZ, of Dayton, Ohio.—*Improvement in Rakes for Harvesters.*—Patent dated December 4, 1860.—This invention consists in the manner of arranging the hinged independent reel arms G for operation, in connection with the centrally pivotted rake arm A A B, and undulating cam H; also in combining with the ordinary set screw and slotted brace an auxiliary adjustable slotted wing and a set screw; and also in the arrangement of the slotted wings and set screws.

The inventor says: I *claim*, first, the peculiar manner described of arranging the hinged independent reel arms G, for operation in connection with the centrally pivotted rake arm A A B, and undulating cam H, substantially as and for the purposes set forth.

Second. By combining with the ordinary set screw W, and slotted brace Y Y, an auxiliary adjustable slotted wing U, and a set screw X, substantially as and for the purposes set forth.

Third. The arrangement, with the centrally pivotted rake arm A A B, centre shaft C, cam H, and flanged hub I J, independent reel arms G G, circular platform K, pivotted reel bar T, and rakes o, and adjusting braces Y, of the slotted wings U, and set screws X, substantially as and for the purposes set forth.

No. 30,836.—JOHN H. RANKIN, of Versailles, Mo.—*Improvement in Corn Planters.*—Patent dated December 4, 1860.—This invention relates to the apparatus for distributing the seed and to the manner of operating such apparatus.

Claim.—The valves *j k*, spring *n*, shaft K, and arms *g g*¹, when arranged and operating together, substantially in the manner and for the purpose described.

No. 30,837.—JOHN G. ROBINSON, of Biddeford, Me.—*Improvement in Ploughs.*—Patent dated December 4, 1860.—When the ploughs are in operation the frame G is allowed to work longitudinally on the pin o, and the eye of the bar J is sufficiently large to admit of a lateral movement of the frame. When the front part of the frame G is depressed and the ploughs thrown out of the ground, the frame is held steadily and firmly in an elevated position in consequence of the bar J being in the back and narrow part of the slot L. By adjusting the lever K and the frame G the ploughs may be depressed or elevated.

Claim.—The arrangement of the arm *b*, slotted pendant C, and axle A, with the plough frame G, adjustable bar J, and adjustable lever K, as and for the purposes shown and described.

No. 30,838.—DANIEL G. ROLLIN, of New York, N. Y.—*Improvement in Spiral Hoop Skirts.*—Patent dated December 4, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Making a spiral hoop skirt, in sections, with any suitable number of successive hoops, each section placed right and left to the other, substantially in the manner and for the purpose described.

No. 30,839.—C. A. ROSE, of Columbia, Ala.—*Improvement in Cotton Seed Planters.*—Patent dated December 4, 1860.—This invention consists in the employment of a bi-conical seed barrel provided with a perforated strap, in connection with a swinging, or rising and falling coverer and a furrow share, all being attached to a suitable beam.

Claim.—The described arrangement of the share E, bent arms F, axle G, wheels H, bars *b*, hopper I, hinged coverer L M, and seed box N, the said parts being constructed and combined in the manner and for the purposes set forth.

No. 30,840.—ANSON ROWE, of Atalissa, Iowa.—*Improvement in Grain Riddles.*—Patent dated December 4, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The construction of the riddle with a reclining board D, and rests B, arranged longitudinally with the course of the grain, and the wires sunk into the edges of said rests and into the face of the frame, and otherwise made as shown and described, for the purposes set forth.

No. 30,841.—ROBERT SCHONE, of New York, N. Y.—*Improvement in Time Registers.*—Patent dated December 4, 1860.—This apparatus is arranged in and on a case A, which, in its turn, is placed in the interior of a box B, the top of which is provided with an ordinary

clock dial C, of glass, or any other transparent material, and which has an aperture *a*, in the centre, to communicate with the funnel-shaped cup, or receiver D, of the apparatus.

Claim.—The arrangement of the lip *e*¹, on the spout *c*, in combination with the cavities *d e*, notched movable disk G, inclined circular channel H, and drawer I, constructed and operating as and for the purpose specified.

No. 30,842.—SAMUEL J. SHAW, of Marlborough, Mass.—*Improvement in Shirt Bosom Expanders*.—Patent dated December 4, 1860.—This invention consists of a metallic or elastic wire provided with a hook *a* and two shoulders *b b*.

Claim.—A shirt bosom expander, constructed substantially as described, and its arrangement and combination with a shirt bosom, in manner and for the purpose specified.

No. 30,843.—EBEN F. STARR, of New York, N. Y.—*Improvement in Revolvers*.—Patent dated December 4, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim, first, the construction of the upper piece A, with the two cheeks *i i*, to hook or lap over the back of the piece B, on opposite sides of a tenon *e*, provided on the latter, and to receive a pin *g* passing also through said tenon, substantially as described.

Second. I claim the arrangement of the ratchet wheel H, with the cylinder G, arbor *l*, and screw *k*, as and for the purposes shown and described.

Third. I claim the arrangement of a collar *m* with the arbor *l*, barrel C, and cylinder G, as and for the purposes shown and described.

Fourth. I claim applying the springs 14 and 16, of the cocking and revolving dogs within a circular groove 17, in one side of the hammer butt, substantially as described.

Fifth. I claim constructing the cocking lever with two teeth or projections 20 and 21, arranged substantially as described, the one to lock the cylinder while the firing is effected by the trigger, and the other to lock the cylinder while it is fired by the said lever, as described.

Sixth. I claim making the channel guide with two distinct depressions or concaves 25, 26, one within the other, so as to guide the fingers in capping, all as set forth.

No. 30,844.—ENOCH THOMAS, of Beverly, and WILLIAM K. HALL, of Phillippa, Va.—*Improvement in Hydraulic Engines*.—Patent dated December 4, 1860.—This invention consists in the arrangement of a swinging gate and concentric seat, in combination with a swinging valve and curved abutment faces.

Claim.—The arrangement of a swinging gate A B and concentric seat D, in combination with a swinging valve F F¹ and curved abutment faces E E¹ H H¹; all being arranged and operated substantially in the manner and for the purpose set forth.

No. 30,845.—HORACE TUPPER, of Buffalo, N. Y.—*Improvement in Railroad Switches*.—Patent dated December 4, 1860.—This invention is intended to obviate the difficulty of a moving rail to give direction to the car; it is also intended to renew that portion of the rail which always receives the shock of the car in turning and which wears very fast.

Claim.—The arrangement of the guards D D, made reversible and with one point fitting in a V-groove in the rail with the snells H H and the rails A A¹, the several parts being constructed in the manner and for the purpose specified.

No. 30,846.—FRANCIS J. VITTUM, of Chelsea, Mass.—*Improved Hand Machine for Pegging Boots and Shoes*.—Patent dated December 4, 1860.—The claim and engravings show the nature of this improvement.

Claim.—A movable centre, in combination with the awl and peg driver, operating as described, for the purpose specified.

No. 30,847.—ALFRED J. WATTS, of Utica, N. Y.—*Improvement in the Manufacture of Dentists' Crystalline Gold*.—Patent dated December 4, 1860.—This invention consists in a new manufacture of gold called "crystal gold," obtained by electricity for the purpose of filling teeth. A description of the mode of making is too long for a place in this report.

Claim.—The crystal gold described, obtained by a process, substantially as specified.

No. 30,848.—LUTHER WENTWORTH, of Burlington, Iowa.—*Improved Apparatus for Elevating Water*.—Patent dated December 4, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim supporting the vertical shaft E of the wind wheel of said apparatus upon the dish-shaped turn table D, when the said table is made to close an opening in the base plate A, which is surrounded by the annular trough *g*, and when the endless series of connected buckets *s s* are made to pass up and down through apertures in the said dish-shaped turn table, all substantially as set forth.

I also claim combining the shaft *h* of the described wind wheel with the hinged vanes *v v*, when the springs *d d* and weight *q* are combined with the said hinged vanes, and when the said wind wheel is made to operate the series of connected buckets *s s*, substantially in the manner set forth.

No. 30,849.—SMITHWICK WHITLEY, of Tallahassee, Fla.—*Improvement in Ploughs*.—Patent dated December 4, 1860.—This invention consists in the arrangement of the different parts.

Claim.—The arrangement of the circular pivotted adjustable share foot *D* with the beam *A*, pivotted adjustable bar *F*, and standard *C*, as and for the purposes shown and described.

No. 30,850.—SIMON WING, of Waterville, Me.—*Improvement in Photographic Cameras*.—Patent dated December 4, 1860.—This invention consists in a mechanical means of moving the plate holder, in combination with a scale or index for defining its position with respect to the lens to accord with the required number of impressions to be taken on the plate. It also consists in the application of convenient mechanism for simultaneously adjusting the several lens tubes in position where two or more of these tubes are used in the same camera.

The inventor says: I *claim* a mechanism for moving the plate holder *H*, in combination with an index for defining its position, operating substantially in the manner described.

Second. I claim the mechanical means described, or its substantial equivalent, for varying the position of the lens tubes *a b c d*.

No. 30,851.—G. W. WOOLLEY, of Philadelphia, Pa.—*Improvement in Fountain Pens*.—Patent dated December 4, 1860.—The claim and engravings explain the nature of this invention.

Claim.—An ink-holding and controlling reservoir *v*¹ for writing pens, constructed and applied within the concave of the pen, substantially in the manner and for the purpose set forth.

No. 30,852.—JACOB R. BYLER, of Salisbury Township, Pa., assignor to himself and HUGH W. BLACK, of Lancaster County, Pa.—*Improvement in Rakes for Reaping Machines*.—Patent dated December 4, 1860.—This invention consists in the arrangement and combination of the parts named in the claim.

Claim.—The arrangement of the upright slide *B* with its lever arm *E*, peg *M*, and headed pins *b*, in connection with the lever arm *R I* and turning shaft *H*, and operated by the rod *G* and cam *N*, in the manner described, for the purpose specified.

No. 30,853.—JOHN S. GALLAHER, JR., of Washington, D. C., assignor to EDWIN CHAMBERS and CYRUS CHAMBERS, JR., of Philadelphia, Pa.—*Improvement in Machines for Folding Paper*.—Patent dated December 4, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the construction and use of traversing gripes, or their equivalents, connected with moving endless belts, for the purpose described, irrespective of any special arrangement or combination of the same or mode of operating them.

Second. I claim the use of the traversing cams, or their equivalents, in combination with moving endless tapes or bands, whether arranged as fixtures or as adjustable devices, for the purposes set forth.

Third. I claim the vibrating pendant counterpoised folding blades, or their equivalents, irrespective of any special manner of arranging or operating the same, as described and shown.

Fourth. I claim the creasing collars on the rollers or cylinders, constructed and operating substantially as and for the purpose specified.

Fifth. I claim the adjustable graduating fork device *W W X X X X*, or its equivalent, for the purpose as set forth, constructed and operating substantially as described.

Sixth. I also claim the invention of the automatic packing box or paper receptacle *b*², when constructed and operated substantially in the manner set forth and shown.

No. 30,854.—JASON W. HARDIE, of New York, N. Y., assignor to JAMES H. STEVENS, of said New York.—*Improvement in Sewing Machines*.—Patent dated December 4, 1860.—This invention relates to single threaded sewing machines, and to that particular class in which a barbed or hook needle is used for drawing thread through cloth, together with a swinging or vibrating guide for hooking the thread into the barb of the needle.

Claim.—The method of communicating the vibratory or swinging movement to the thread guide *G* by means of the bent elastic rod *E*, in combination with the cam *f* on the driving shaft, substantially as set forth.

No. 30,855.—EDMUND MAHER, of New York, N. Y., assignor to himself and MARCUS M.

WILCOX, of said New York.—*Improved Harness Trace*.—Patent dated December 4, 1860.—This invention consists in forming a harness trace, or tug, of vulcanized gutta percha, or other gum having a slightly yielding woven, or other fibrous fabric within it, in such a manner as to enable it to have a slightly elastic elongation and contraction, corresponding with the inequality of the draught of the horse, and thereby giving a corresponding relief to the shoulders.

Claim.—The described new and improved article of manufacture—the same being an elastic harness trace formed of a textile fabric composed of the materials and substantially in the manner set forth.

No. 30,856.—JOHN J. MARCY, of Meriden, Ct., assignor to EDWARD MILLER, of said Meriden.—*Improved Device for Securing Lamp Chimneys*.—Patent dated December 4, 1860.—The claim and engravings show the nature of this improvement.

Claim.—The combination of the two simultaneously acting hooked levers C D with each other and with the lamp top, in the manner shown and described.

No. 30,857.—JAMES MARTIN, of Toronto, Canada, assignor to himself and JAMES E. THOMSON, of Buffalo, N. Y.—*Improvement for Superheating Steam for Locomotive Engines*.—Patent dated December 4, 1860.—The inventor says: The strong draught through the chimney, made by the exhaust, will cause a vacuum to be formed in the annular chamber S, the filling which vacuum will cause a strong draught through the flues R of the chambers A and the pipes B B.

The inventor says: I *claim*, first, the combination and arrangement of the flues R with the steam chambers A, for the purposes and substantially as described.

Second. I claim the annular chamber S, in combination with the steam chambers A, flues R, and pipes B, for the purposes and substantially as set forth.

No. 30,858.—HENRY T. PRATT, of Fitchburg, Mass., assignor to himself, A. DAVIS, and C. E. PRATT, of said Fitchburg, and H. C. CREHORE and C. T. ROGERS, of New York, N. Y.—*Improved Folding Chair*.—Patent dated December 4, 1860.—The object of this invention is to obtain a chair that may be folded compactly, and be provided with a cane or other stiff bottom.

Claim.—The legs A A B B and seat D; the latter being attached to the former by hinges or joints *b b c c*, and the legs A provided with slots *d* to receive pins *e* of the legs B B, substantially as and for the purpose set forth.

No. 30,859.—HENRY WARREN, of Hoboken, N. J., assignor to HENRY BEEBE, of said Hoboken.—*Improved Foot Scraper and Brush*.—Patent dated December 4, 1860.—This invention consists in a novel form and arrangement of brushes for the heel, toe, and both sides of the shoe, in conjunction with scraping blades for the soles of the shoes.

Claim.—The arrangement of the laterally sliding curved brushes F F and springs *g g*, with the brackets D, scraping blades B B, and fixed brushes C C, as and for the purposes shown and described.

No. 30,860.—JOHN WIND, of Thomasville, Ga., assignor to himself and T. J. BOTTOMS, of said Thomasville.—*Improvement in Machines for Husking and Shelling Corn*.—Patent dated December 4, 1860.—In operating this machine, the corn is held against the saw so as to cut off the stem at the end of the ear. The auger saw then loosens the shuck, and the ear falls into the wings C, where it is husked by the pressure of the wings against the edge C¹. The husks being removed from the wings by the brush D, the corn being left on the belt *c* is carried by it into the sheller E, where it is shelled by the action of the cone E¹ against the roughened sides of the sheller E; as the corn passes out of the sheller the fan F winnows it.

Claim.—The arrangement of the circular saw *a*, auger saw *b*, and spiral revolving husker C, in combination with the conveyor band *c* and sheller E, substantially in the manner described, and for the purposes specified.

No. 30,861.—SAMUEL W. ADAMS, of Moultrie County, Ill.—*Improvement in Corn Planters*.—Patent dated December 11, 1860.—G is the plough share; H the shovel, which, in combination with the knife I, covers up the furrow after the corn has been dropped therein. J J are bands of iron, which, in combination with the pins *j j* and braces *j¹ j¹*, hold the two ploughs together firmly. K K are weights to keep the slides in position.

Claim.—The combination and arrangement, as described, of two ploughs, with the slide L, seed boxes B B, levers C C and D, shovel H, and knife I, substantially as and for the purposes described.

No. 30,862.—WILLIAM APPERLY and CALVIN P. JOHNSON, of Memphis, Tenn.—*Improve-*

ment in Cotton Harvesters.—Patent dated December 11, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim*, first, the reciprocating plate E, pickers *d*, and plate F, when combined and arranged to operate as shown and described, to wit: the pickers *d*, having a rotary and also a reciprocating and rising and falling movement, as and for the purpose set forth.

Second. The arrangement of the crank shaft G, slotted uprights I I, plate F, roller J, and the belts *j k*, or their equivalents, all being arranged, substantially as shown, for the purpose of giving the proper movement to the pickers *d*.

Third. In connection with the plates E F and pickers *d*, the endless straps M, blower or brush L, and the aprons N N, arranged for joint operation, as and for the purpose set forth.

No. 30,863.—H. H. BAKER, of New Market, N. J.—*Improvement in Ploughs.*—Patent dated December 11, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the mounting of the plough shares upon wheels arranged in the manner shown by B and C, through the medium of a frame G, which slides vertically within, and is supported and guided by an exterior or principal frame A as shown and described.

Second. Raising the ploughs 1 and 2, vertically at will, by the motion of the bearing wheel C, through the aid of mechanism, substantially as set forth.

Third. The means, substantially as shown and described, for holding the forward side of the plough frame G, higher than the rear side thereof, when in the act of being elevated, in combination with means substantially as shown and described, for holding the said plough frame level when it is fully lowered for the purpose designated.

Fourth. In combination with the wheels B and C, frame A, ploughs 1 and 2, the employment of the spring E, for the purpose designated.

Fifth. The employment of the adjustable standard S, in combination with the spring E, for adjusting the rigidity of the latter, in the manner and for the purpose shown.

Sixth. In combination with the adjustable spring E, the employment of the wheel M, for the purpose set forth.

No. 30,864.—D. B. BARTHOLOMEW, of Lancaster, Penn.—*Improved Arrangement of Devices in Sawing Machines.*—Patent dated December 11, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the arrangement of the hinged support and rack *h*, with the pressure roller O, and adjustable bar M, in the manner shown and described, so that when the roller passes the end of the stuff, the support N will take to the rack *h*, and prevent the roller from pushing the stuff against the saw, all as set forth.

I claim the arrangement, as shown and described, of the obliquely placed feeding roller J, and adjustable gauge Q, with the platform A, saw G, levers C C, shafts D D, rod F, and roller O, all as shown and described.

No. 30,865.—DEXTER BEAL and WILLARD W. BEAL, of Lester, Iowa.—*Improvement in Seeding Machines.*—Patent dated December 11, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Operating the seed slides E by means of the oval hubs L, provided with the hook projections *f*, the rods O, provided with hooks *h*, the springs P and R, the pinion K and wheel I, the latter being provided at its periphery with the toothed and smooth portions, and all arranged substantially as described.

No. 30,866.—HENRY BELL, of Clinton, Ill.—*Improvement in Seeding Machines.*—Patent dated December 11, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The wheels L L, provided with sliding bars N, having screws *h* at their ends, which are fitted in the holes *i* of the wheels, in connection with the curbs M, which encompass the wheels, all being arranged as and for the purpose set forth.

No. 30,867.—NEWTON BENEDICT, of Aurelius, N. Y.—*Improvement in Swifts.*—Patent dated December 11, 1860.—The arms *a* are connected together by hinges *b*, the axes of which are parallel to the axis on which the machine itself turns when in use. By this means the outer ends of the arms may be separated horizontally to the positions seen in the engravings or brought together into a small space when the machine is not in use.

Claim.—A swift having the various parts constructed, arranged, combined, and operating in the manner and for the purpose described.

No. 30,868.—H. C. BOARDMAN, of Morrisville, Vt.—*Improved Clothes Dryer.*—Patent dated December 11, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the use of a waterproof sliding collar or hub, constructed

as described, in combination with arms B or braces D, when operated in the manner and for the purposes set forth.

Second. The method of folding the clothes dryer, constructed with arms and braces as described, by means of a loop in the line G, passed around the pin *p*, attached to the upper sliding collar E, in the manner set forth.

No. 30,869.—THEODORE BRIGGS, of Philadelphia, Pa.—*Improvement in Explosive Harpoons*.—Patent dated December 11, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Making an explosive harpoon lance, to be thrown by hand, with its forward end constructed and applied to be exploded by the breaking of the wooden pin *e*, as described, its barbs *ff* being pivotted together in the mortise *g*, and turning outward on being released by the backward motion of the armed slide *i*, as described, the whole being constructed and arranged to operate together, in combination with the body of the implement, in the manner described, and for the purpose specified.

No. 30,870.—JEAN COMMUNY, of New Orleans, La.—*Improvement in Apparatus for Supplying Sulphurous Acid Gas*.—Patent dated December 11, 1860.—The nature of this improvement, named in the claim, may be seen in the engravings.

Claim.—The combination, with the discharging pipe F, of the receiving box H, and conducting pipe I, in the manner and for the purposes substantially as shown and described.

No. 30,871.—HORACE CROFOOT, of Tawboro, N. C.—*Improvement in Seeding Machines*.—Patent dated December 11, 1860.—This invention consists in a peculiar combination and arrangement for a roller and rotary harrows, whereby the whole area of the ground over which the machine passes will be fully acted upon, and the seed properly covered with pulverized earth, and the same rolled and compacted on the seed.

Claim.—The arrangement of the roller B with the rotary harrows L L, shaft I, cylinders M M, shafts J I, and lever N, in the manner shown and for the purpose set forth.

No. 30,872.—GEORGE P. EVANS, of Malden, Mass.—*Improved Clasp for Hooped Skirts*.—Patent dated December 11, 1860.—The claim and engravings show the nature of these improvements.

Claim.—As a new article of manufacture, a skirt hoop united at its ends, as described, by elastic or tubular caoutchouc clasps, constructed so as to operate substantially in the manner and for the purpose as set forth.

No. 30,873.—A. L. DENNISON, of Waltham, Mass.—*Improved Method of Regulating Watches*.—Patent dated December 11, 1860.—This invention consists in forming one of the pins eccentric, and attaching to its head a small hand index, which will show the position of the pin and the degree to which the spring is confined between the two pins.

Claim.—The eccentric pin 3, with its index hand *n*, and graduated arc or dial *i*, in combination with the regulating hand D, and hair spring C, arranged and operating in the manner set forth, for the purpose specified.

No. 30,874.—GEORGE B. FIELD, of Saint Louis, Mo.—*Improvement in Glass Coffins*.—Patent dated December 11, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The article of manufacture, viz: a coffin made of blown glass, composed of two or more pieces, in the manner substantially as described.

No. 30,875.—JAMES FITTON, of Cavendish, Vt.—*Improvement in Carding Engines*.—Patent dated December 11, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of an endless traversing apron, with the cylinder of a carding engine, operating substantially in the manner set forth.

No. 30,876.—THOMAS A. GALT, of Sterling, Ill.—*Improvement in Seeding Cultivators*.—Patent dated December 11, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Attaching the seed box I to the cultivator A, by means of the arms N N, fitted on the pintles *h*¹, and having the wheel L placed on the frame M, which is attached to the bottom of the seed box, said wheel having the driving mechanism for the seed slide connected with it, in connection with the V-shaped draught bar H, attached to the frame of the cultivator, and all arranged to operate as and for the purpose set forth.

No. 30,877.—PETER J. HARDY, of New York, N. Y.—*Improved Recumbent Chair*.—Patent

dated December 11, 1860.—The claim and engravings show the nature of this improvement.

The inventor says: I *claim* the reclining back *d*, and hinged bottom *e*, connected by the crank arms 3, and links 4, in the manner and for the purposes specified.

I also claim the stop *h*, on the arm piece *r*, passing through the slotted slide *g*, and provided with the spring 10, and projections 8, to take the notches 9, in the slide *g*, as and for the purposes set forth.

No. 30,878.—THOMAS G. HAROLD, of Brooklyn, and GIBBONS L. KELTY, of New York, N. Y.—*Improved Curtain Fixture*.—Patent dated December 11, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A blind or curtain roller, fitted to receive a lateral or sideways motion at one end, by the action of the cord for connecting or disconnecting said roller from a stop, for the purposes specified.

No. 30,879.—AMOS A. HOTCHKISS, of Monroe City, Mo.—*Improvement in Water Drawers*.—Patent dated December 11, 1860.—The claim and engravings show the nature of this improvement.

Claim.—The arrangement of the weight on the "bite" of the rope, in connection with the bucket and cleet *d*, in the manner described, so as to keep the weight out of the water entirely, and the bucket from descending too low, so that neither of them shall rill the water when used in connection with the drawing apparatus described.—(Suspended.)

No. 30,880.—BEN. JACKMAN, of Louisville, Ky.—*Improvement in Cotton Cleaning Machines*.—Patent dated December 11, 1860.—This invention consists in the employment of revolving screens, in connection with a dust chamber, and with a stationary screen and condensing rollers.

Claim.—The arrangement of the two rotary screens B B, and aprons D E, with the box A, dust chamber C, screen H, and compressing rollers F F, in the manner and for the purposes shown and described.

No. 30,881.—JOHN F. KELLER, of Greencastle, Pa.—*Improvement in Water Elevators and Conveyors*.—Patent dated December 11, 1860.—This invention consists in a peculiar arrangement of railway and water carrier, the latter being operated by means of a windlass.

The inventor says: I *claim* the water carriage D, in combination with the pendent portion of the rail A; said carriage being provided with wheels which clasp the sides of the rail for the purpose of guiding the carriage when descending or ascending the well, substantially as set forth.

I claim the use of the tilting rails B, in combination therewith, for the purposes set forth.

No. 30,882.—STEPHEN A. LINDSAY, of Unionville, Md.—*Improvement in Rakes for Harvesters*.—Patent dated December 11, 1860.—The claim and engravings show the nature of this invention.

The inventor says: I *claim*, in combination with a hinged platform and a hinged revolving reel and rake, the inclined shaft P and universal joint *q*, for the purpose of retaining the rakes and reels in their proper relative positions to the platform when the latter is raised or lowered, substantially in the manner described.

I also claim attaching the rakes or reels to their respective arms by means of the links *n* and springs O, substantially in the manner and for the purpose described.

No. 30,883.—A. S. MARKHAM and DANIEL MARKHAM, of Monmouth, Ill.—*Improvement in Corn Planters*.—Patent dated December 11, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Securing the seed distributing slide H in proper position by means of the slides J, in connection with the adjustable cut offs I, substantially as shown and described, to admit of the application or employment of seed slides of different thicknesses, to regulate as may be desired the quantity of seed to be planted on a given area, or the number of seeds to be planted at a dropping.

No. 30,884.—WILLIAM H. H. MILLEN, of Littleton, N. H.—*Improvement in Steam Ploughs*.—Patent dated December 11, 1860.—The object of this invention is to obtain a light, portable, and efficient ploughing machine; one that may be readily manipulated and the parts placed under the complete control of the operator.

The inventor says: I *claim*, first, the arrangement of the levers G G, sliding pinions *f f*, on shaft F, and the gearings I I k k, on the shafts F J, essentially as shown, whereby the ploughs K¹ may be rotated or stopped instantly at the will of the operator or attendant.

Second. The arrangement of the levers R R with pawls *t* and lips *u* attached, the ratchet Q on the hollow shafts N N, the clutches *p q*, gearing P on the shafts O, on which the hollow shafts N are placed, and the ropes or chains *u n* attached to the cross bar M of the arms *k*, essentially as shown, for the purpose of elevating the shaft J and its ploughs K¹ when desired.

No. 30,885.—SAMUEL MOWRY and ELI DEPPEN, of Womelsdorf, Pa.—*Improvement in Corn Planters*.—Patent dated December 11, 1860.—This invention consists in a peculiar combination and arrangement of certain devices whereby the spaces between the carrying wheels and that between the grain dropping boxes, respectively, as well as the spaces between the said wheels and dropping boxes, collectively, are rendered changeable, so as to enable the operator to more readily convert the same machine for properly dropping any of the various kinds of grain.

The inventors say: We *claim*, first, the arrangement of the divided axle F, the seed boxes G G¹, the disks I I, tubes O O¹, springs 8 8¹, pinions H H¹ and N N¹, shaft M, pinion L, spur wheel K, and wheels A A¹; the several parts being constructed and connected substantially as and for the purpose specified.

Second. In combination with the subject of the first claim, we claim the lever E, bridle Q, furrowing tubes P P¹, covering hooks R R¹, and tie rods S S, arranged and used as and for the purpose specified.

No. 30,886.—JAMES W. LAWRENCE, of New York, N. Y., assignor to HENRY BREWSTER, JAMES W. LAWRENCE, and JOHN W. BRITTON, of said New York.—*Improvement in Road Wagons*.—Patent dated December 11, 1860.—The claim and engravings show the nature of this improvement.

Claim.—Attaching the side bar to the body of the wagon by a rigid central and two elastic supports, when the side bar is so formed that it may have elasticity between the central and the side supports, as set forth.

No. 30,887.—B. PICQUET, of Augusta, Ga.—*Improvement in Machines for Sowing Fertilizers*.—Patent dated December 11, 1860.—The scattering mechanism of this machine is furnished with a plough for loosening the earth and forming a furrow, and a scraper for covering the fertilizer or seed, and levelling the earth.

Claim.—The arrangement of the right and left screw B, variable driving cones *g g*, apertures *e*, and partitioned hopper A, with the slotted beam D, wheel F, and adjustable plough and standard G G¹, as and for the purpose shown and described.

No. 30,888.—GEORGE D. SARGENT, of Boston, Mass.—*Improved Folding Bedstead*.—Patent dated December 11, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* my improved folding bedstead or arrangement and connections of four sets A A¹ B C of progressive levers, in the manner (without the intervention of separate posts) substantially as described.

I also claim, in its combination with such a folding bedstead, a covering chair D, as constructed, with a chambered back opening into the space under the seat and between the legs, and to be applied to such bedstead in the manner as specified.

No. 30,889.—OSWALD SCHEVENELL, of Marion, Ala.—*Improved Tenoning Tool*.—Patent dated December 11, 1860.—The object of this invention is to form round tenons on the ends of spokes by means of an instrument which can be adjusted for cutting tenons of various diameters, and which will be self-centring and require very little manipulation to adapt it to the work it is desired to perform.

The inventor says: I *claim* the portions A A¹ A¹, the circular plate B with its elliptical hole, the parallel bars D D, with the crescent pieces *b b*, in combination with the knives F F, knife boxes E E, and their lugs *g g*, and set screws *e e*, all constructed, arranged, and operating substantially in the manner and for the purposes set forth.

I also claim, in combination with the plate B and parallel bars D D, the bar H, with its centring point *k*, when said bar is attached to the instrument, substantially as and for the purposes specified.

No. 30,890.—J. V. H. SECOR, of New York, N. Y.—*Improvement in Seeding Machines*.—Patent dated December 11, 1860.—This invention consists in an improved seed-distributing arrangement, and parts pertaining to the operating of the same, and to an improved arrangement of the furrow and covering shares; and also an improved means for elevating and lowering the front part of the machine.

The inventor says: I *claim*, first, elevating and depressing the front part of the frame A by means of the eccentric D, fitted in the back part of the draught pole, and arranged essentially as and for the purpose set forth.

Second. The arrangement of the adjustable frame F^1 , provided with the wheel G , and connected with the platform or foot piece H , as and for the purpose specified.

Third. The levers $K K$, bars l , slides L , boxes N , and sides a^* , of the hoppers, arranged and combined to operate as and for the purpose set forth.

Fourth. In connection with the levers K , slides L , and boxes N , the bars or levers O , arranged to operate conjointly with the parts aforesaid, for the purpose specified.

Fifth. The arrangement of the furrow shares Q , with the shafts R , and bars S , as and for the purpose set forth.

Sixth. The arrangement of the covering shares $T T$ with the shafts $U U$, springs $W W$, adjustable pendants X , and buttons Y , as and for the purpose set forth.

No. 30,891.—RICHARD SOLIS, of New Brunswick, N. J.—*Improvement in Machines for Making Shirred Goods*.—Patent dated December 11, 1860.—This invention consists in arranging the toothed guide in shirring machines close to the revolving guide, and in pivoting the said toothed guide for convenience in threading it.

The inventor says: I *claim*, first, arranging the toothed guide b , in machines for manufacturing shirred or other elastic goods, down close to the revolving guide J , as and for the purpose specified.

Second. The pivotted guide $a b c$, constructed, arranged, and operating substantially as and for the purposes set forth.

No. 30,892.—OLIVER SPARKS, of Shelbina, Mo.—*Improvement in Ploughs*.—Patent dated December 11, 1860.—This invention consists in combining in a novel manner a breaking, or sod plough, with a trench, or subsoil plough, whereby both ploughs may be thrown into or out of the ground simultaneously.

Claim.—The two ploughs, arranged one in front of the other, as and for the purposes set forth, in combination with the levers $F G^1 H$ and G , arranged, supported, and operating as described.

No. 30,893.—JACOB D. SQUIRES, of Cold Spring, N. Y.—*Improvement in Apparatus for Raising Water*.—Patent dated December 11, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the ring I , either plain or provided with depressions $c c$, attached to the bucket by ears $b b$, or their equivalent, and leaving a space between the bucket and the ring, when the same is used in combination with the tilting rod H , substantially as set forth.

I also claim the wedge piece N , provided with the wedge-shaped arms j and k and intermediate space l , in combination with the hinged brake L , acting on the windlass, substantially as described.

No. 30,894.—E. SUMNER TAYLOR and H. S. LARNED, of Cleveland, Ohio.—*Improvement in Water Elevators*.—Patent dated December 11, 1860.—This invention consists of a hollow cylindrical shaft, through which the rope passes, secured to and rising upward from the centre of the bucket, having a rib on one side, facing in the direction of the spout of the bucket.

Claim.—The rib L^1 , spirally inclined planes $J J$, and niche I , for facing the spout of the bucket O to the spout B of the curb, as specified, and in combination therewith, we claim the special arrangement of the lip H and box K , for the purpose set forth.

No. 30,895.—J. K. TAYLOR, of Bridgeport, Conn.—*Improved Bolt Cutter*.—Patent dated December 11, 1860.—The claim and engravings explain the nature of this invention.

Claim.—Holding on or against the nut, whilst the cutter is being actuated, by the lever instead of the bolt, for the purpose of leaving that part of the bolt that is to be cut off free from any resistance on the side opposite to the cutter, substantially in the manner and for the purpose set forth.

No. 30,896.—JEREMIAH C. TILTON, of Sanbornton Bridge, N. H.—*Improvement in Temples*.—Patent dated December 11, 1860.—This invention consists in inserting the teeth of the temple into a piece of wood, which is fitted to the plate of the temple in such a manner as to be removable for the purpose of being renewed with a new set of teeth when the teeth are worn out, or for the purpose of renewing the teeth singly, when injured.

Claim.—Inserting the teeth $c c$ into a removable piece of wood C , fitted and secured in the plate A , substantially as and for the purpose specified.

No. 30,897.—BENJAMIN TINKHAM, of Cameron, Ill.—*Improvement in Cultivators*.—Patent dated December 11, 1860.—When this machine is in operation the attendant takes hold of

the handles *g*, by means of which he can swing either of the beams *E*, with its share, inwards or outwards, and thus make the ploughs conform to any inequalities in the hills or rows of corn or other plants.

The inventor says: I *claim*, first, the combination with the axle *B* and plates *c d* of the beams *E*, plates *a b*, and pins or bolts *f*, substantially as and for the purposes set forth.

Second. In combination with the above I claim the pins or supports *h*, with the hounds *D*, as and for the purpose described.

No. 30,898.—PIERRE D. VAN HOESSEN, of New York, N. Y.—*Improved Washing Machine*.—Patent dated December 11, 1860.—This invention consists in the arrangement of a triangular wash tub, in combination with a reversible washboard, in such a manner that said washboard can be used either for the purpose of pounding clothes or in the ordinary manner for hand washing.

Claim.—The combination of the triangular-shaped tub *A* with the reversible washboard *C*, constructed and operating substantially in the manner and for the purpose set forth.

No. 30,899.—FRANKLIN W. WILLARD, of New York, N. Y.—*Improvement in Vapor Lamps*.—Patent dated December 11, 1860.—This lamp is constructed by elevating a fountain, which contains the oil, at such a height above the burner as to give the required amount of pressure on the column of oil which is necessary to resist the backward force of the vapor in the vapor chamber, the flow of oil through the feed pipe from the fountain to the burner being regulated and cut off by means of a stop cock.

Claim.—The combination of the plate *K*, strip of metal *I*, and the wire *J*, constructed and operating for the purposes and uses substantially as set forth in the specification.

No. 30,900.—WILLIAM F. WARBURTON, of Philadelphia, Pa.—*Improvement in Ventilated Hats*.—Patent dated December 11, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A flexible metallic band or strip secured to the inside of a hat, at such a distance from the same and between such points that it will accommodate itself to the wearer's forehead without interfering with the passage of air between said band and the hat, as set forth.

No. 30,901.—JOHN J. WATSON, of Buffalo, N. Y.—*Improvement in Tapping Gas and Water Pipes*.—Patent dated December 11, 1860.—This invention consists in the arrangement and construction of the different parts of the machine.

Claim.—The employment of the wheel *B*, provided with holes *D C E*, and divided in two parts through its periphery, substantially as and for the purpose specified.

No. 30,902.—JOHN ADT, of Waterbury, Conn., assignor to WILLIAM B. BARNARD, of said Waterbury.—*Improved Knob Lock*.—Patent dated December 11, 1860.—The object of this invention is to apply, to one of the knobs of any ordinary mortise latch, or any latch with knobs, to operate it, a simple and reliable means, whereby the latch may be locked and the knobs prevented from turning, or the latch may be unlocked and allowed to turn freely.

Claim.—The arrangement of the spring *c* and a ring *g* that is provided with a depression *i i*, lugs *h h*, and slot *i*, with the shank *E*, box *d*, pin *a*, and notched rose *C*, as shown and described for the purposes set forth.

No. 30,903.—A. J. KRAMER, of Marion, Iowa, assignor to himself, BENJAMIN REECE, and N. W. CLAFLIN, of said Marion.—*Improved Arrangements of Parts in Rotary Planers*.—Patent dated December 11, 1860.—Within the frame *B* there is placed an arbor *F*, at one end of which a circular disk *G* is attached, having planes fitted in it in the usual way. The arbor *F* has a horizontal position, and the planer head consequently rotates in a vertical plane.

Claim.—The arrangement of the vertically sliding rotary planer *G* with the carriage *I*, adjustable clamp frame *J*, clamp *K*, eccentric *L*, jaws *l l m*, and screws *M M M*¹, as and for the purpose herein shown and described.

No. 30,904.—S. A. WORTHEN, of Morrisville, Vt., assignor to himself and WILLIAM WALKER, of said Morrisville.—*Improvement in Cross Cut Sawing Machines*.—Patent dated December 11, 1860.—This is a cross cut sawing machine, in which the log is automatically released at the termination of the cut.

Claim.—The spring ratchet *D*, arm *I*, lever *L*, weight *W*¹, and arm *H*, in combination with the reciprocating saw and frame, arranged and operating substantially as and for the purpose set forth.

No. 30,905.—JOHN ALLEN, of Union, N. Y.—*Improvement in Harrows*.—Patent dated

December 18, 1860.—This invention consists in an improved device for connecting two or more of the sections comprising the harrow together, for the purpose of securing perfect flexibility, with free vertical, longitudinal, and lateral motion, and the ready separation of the parts.

Claim.—The combination of the vertical oblong links *g g* and horizontal oblong hook links *h h*, substantially as described, whereby the double advantage of allowing a free vertical and horizontal play of the sections of the harrow, and a very efficient and convenient means of connecting and disconnecting them readily, is secured at the same time.

No. 30,906.—ELIAS C. ATKINS, of Indianapolis, Ind.—*Improved Method of Attaching the Handles to Saws.*—Patent dated December 18, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The attachment of the ear or tang to cross cut saws by means of a screw and open slot passing in at the end, or on the edge of the saw, near the end.

No. 30,907.—E. G. ATWOOD, of Derby, Conn.—*Improvement in Skeleton Skirts.*—Patent dated December 18, 1860.—The object of this invention is the production of a light, flexible, and symmetrical skirt, with the hoops so arranged and connected with each other as to give it increased stiffness and elasticity in the direction of its length, and so that the hoops will not tend to raise and catch upon each other in sitting, or that when raised by the wind, or in passing through narrow passages, will readily work themselves down into their proper position.

Claim.—The combination of a series of hoops, to form the skirt, with a series of flattened spiral springs, extending from the waistband, or upper hoop, to the bottom of the skirt, crossing the intermediate hoop, and attached to them by any well known means, for the purpose set forth.

No. 30,908.—LEWIS P. BRADY, of Mount Joy, Pa.—*Improvement in Rakes for Harvesting Machines.*—Patent dated December 18, 1860.—This invention consists in the combination and arrangement of parts.

Claim.—The overlapping plate *F*, on the rake handle *E*, and the guide rod *G* on its side, in combination with the slotted swivel *C*, and perpendicular crank pin *H*, when combined and arranged in the manner, described for the purpose specified.

No. 30,909.—LYSANDER BUTTON and ROBERT BLAKE, of Waterford, N. Y.—*Improved Coupling for Hose Pipe.*—Patent dated December 18, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The folding handle, lever or levers attached to a part or parts of such couplings for hose and pipes as require a rotary movement of said part or parts in the act of setting up, as set forth.

No. 30,910.—CYRUS CHAMBERS, JR., of Philadelphia, Pa.—*Improvement in Paper Folding Machines.*—Patent dated December 18, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, sliding or moving the paper between bars, or their equivalents, by means of revolving wheels, or rollers, whose surfaces come in contact with the paper, as and for the purpose specified.

Second. The combination of revolving surfaces with bars and steps, or their equivalents, arranged substantially as and for the purpose described.

No. 30,911.—JOSIAH W. CHURCH, of Cold Water, Mich.—*Improved Fastening for Hame Tugs.*—Patent dated December 18, 1860.—The claim and engravings explain the nature of this improvement.

Claim.—The combination of the self-locking perforated slide with the perforated bed piece, in the manner and for the purpose substantially as shown and described.

No. 30,912.—JOHN ENDE, of Buffalo, N. Y.—*Improvement in Horse Collars.*—Patent dated December 18, 1860.—The claim and engravings explain the nature of these improvements.

The inventor says: I *claim* the manner in which the clips *G G*, Fig. 4, and hold back rings *D D*, Fig. 1, are attached, as described and for the purpose set forth.

I also claim the peculiar construction of the lock *H I*, Fig. 1 and Fig. 2, in the manner and for the purposes specified.

I also claim the arrangement of the welt seamed in with the pad, and the seam covered by the hames, as described and for the purpose set forth.

No. 30,913.—JOHN DURHAM, of Cherry Grove, Ohio.—*Improved Boot Jack.*—Patent dated December 18, 1860.—The claim and engravings explain the nature of this improvement.

Claim.—The combination of the frame A, with the folding indented crotch B b b¹ and the lid C c, adapted to hold the crotch to its open position and to cover it in its closed position, substantially as set forth.

No. 30,914.—GEORGE N. FAIRCHILD and THOMAS JOYCE, of New York, N. Y.—*Improvement in Collimators.*—Patent dated December 18, 1860.—The object of this invention is to obtain a reliable instrument, with which straight lines running from one point to another at a small distance, and running in a horizontal, or an inclined direction, can be determined in an easy and ready manner.

Claim.—The combination of the two wires c d, with each other and with the mirror D, as shown and described.

No. 30,915.—J. P. FISHER, of Rochester, N. Y.—*Improvement in Carriage Wheels.*—Patent dated December 18, 1860.—The wheels D are composed of several metallic "truss" felloes f, the tire t, tubular spokes S, and binding rods c, the hub H, and its enclosing cap C.

Claim.—The combination of the binding rods c, with the hollow spokes S, hub H, and felloes f, in the manner shown and described.

No. 30,916.—E. F. M. FLETCHER, of Georgia Plains, Vt.—*Improvement in Water Wheels.* Patent dated December 18, 1860.—This invention consists in the use of wheels formed by having spiral buckets attached to semi-spherical hubs, and using, in connection with the buckets, springs so applied to the wheels as to regulate the capacity of the issues according to the force or supply of water.

Claim.—The combination of two hemispherical hubs D D, shaft B, coneave and tapering buckets D D, and springs E; the whole being constructed and arranged and operating in the manner set forth.

No. 30,917.—CORNELIUS GODFREY, of Brooklyn, N. Y.—*Improvement in Boilers.*—Patent dated December 18, 1860.—In using this invention, after filling the boiler with water, and before a fire is made, the dampers X² X³ are closed, and the damper X¹ is opened, giving a direct draught from the furnace E, through the flues Q H and M, into the smoke pipe, or chimney. After the fire is well started, the damper X¹ is closed, and damper X² opened, whereby the draught is diverted through the flues F F and H H under and between the ovens G G.

Claim.—The arrangement of boiler and furnace, or furnaces, with the steam chamber, as described, and for the purposes set forth.

No. 30,918.—JOSEPH GRICE, of New York, N. Y., and ROBERT H. LONG, of Philadelphia, Pa.—*Improvement in City Railroad Cars.*—Patent dated December 18, 1860.—This invention relates to certain novel features in the construction of trucks for cars, designed principally to run on city railroads.

The inventors say: We claim, first, the employment, in combination with the rear end of the frame or car body A, of a truck, pivotted in advance of the axle or axles, and so constructed and arranged with an arc d and suitable bearing plate and friction rolls as to have the entire weight supported by the truck brought on the said arc c, substantially as hereinbefore described, for the purpose set forth.

Second. We claim the employment of two trucks, in combination with the frame A, when the two trucks are each constructed with a single arc d, which sustains the entire weight of the car, and both pivotted at points lying between the axles, substantially as hereinbefore described, for the purpose set forth.

Third. We claim the combination of the spring shaft device e f s, with the double inverted incline on frame A, the whole arranged and operating as specified, for the purpose set forth.

Fourth. We claim extending the frame of the truck from the platform, and forming thereon a pole holder m as and for the purpose described.

No. 30,919.—J. F. HAMMOND, of Lynn, Mass.—*Improved Cement for Roofing.*—Patent dated December 18, 1860.—This invention consists in the combination of the following materials: To one barrel of Wilmington wood tar add sixteen pounds of common rosin; then add three gallons of copal varnish, ten pounds of beef tallow, and one quart of raw linseed oil, and mix and boil the whole well together.

Claim.—The combination of the above mentioned ingredients, or their equivalents, in substantially the proportions specified.

No. 30,920.—JACOB HINEY, of Hartford, Conn.—*Improvement in Faucets for Bottles.*—Patent dated December 18, 1860.—This invention consists in applying to the faucet, constructed in a peculiar manner, a pointed valve, which will allow the stem of the faucet to be

passed through the cork while it is in the bottle, and which will also serve as a valve for opening and closing the orifice in the stem of the faucet.

Claim.—The conical and pointed valve *h*, its stem *i*, and the hollow tube *g*, with the screw portion *c*, in combination with the screw stem *a*, substantially for the purpose set forth.

No. 30,921.—RICHARD WILLIAM HIX, of New York, N. Y.—*Improvement in Railroad Car Brakes.*—Patent dated December 18, 1860.—This invention consists in applying to the ordinary brake shafts, instead of the hand wheel at present used, a circular box, with a movable cap, which box contains three or more spur wheels, which have stationary bearings, and which engage with the teeth of a pinion that is keyed to the brake shaft, and also, with inside gearing on movable cap, so that by turning the cap the motion will be transmitted to the brake shaft, and multiplied according to the size of the central pinion.

Claim.—The combination of the brake shaft *B*, of the geared cap *J*, gear wheels *G*, and pinion *H*, in the manner and for the purposes shown and described.

No. 30,922.—JEDEDIAH HOLCOMB, of Brooklyn, N. Y.—*Improvement in Platform Scales.*—Patent dated December 18, 1860.—This invention consists in the method of adjusting the weighing levers upon jointed side bars, each suspended by links at the middle and both ends, so that the weighing levers may vibrate in all directions while under the load, and yet not affect their capacity to weigh accurately.

The inventor says: I *claim*, first, the combination of the jointed rods *c*², connected by link *D* and six links *B*, for supporting the same, with the frame *A* and weighing levers *E* of a platform scale, for the purposes heretofore set forth.

Second. I also claim the use of the extension case *R*, in combination with the stationary case *P*, weighing levers *E*, and scale beam *T*, for the purposes hereinbefore set forth.

No. 30,923.—I. ROBIN JACOB, of Elizabethtown, Ky.—*Improved Valve Gear for Steam Engines.*—Patent dated December 18, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the forked independent rocker *K*, working on the valve rock-shaft, the two arms *I J*, with their studs *c d* rigidly attached to the said rockshaft and the spring *f*, the whole applied in relation to each other, and operating substantially as herein set forth.

No. 30,924.—JOHN JAMISON, of Gateshead, England.—*Improved Apparatus for Expanding and Compressing Elastic Fluids.*—Patent dated December 18, 1860; patented in England, January 11, 1860.—This invention consists in an improvement in compressing and expanding aeriform fluids by the application of heat in such manner as to effect a high degree of compression or expansion, or both.

Claim.—The combination of the apparatus to produce these actions called "borrowing and lending," with the apparatus performing the functions of what the inventor calls compensating apparatus, substantially as described.

No. 30,925.—FREDERICK C. LEYPOLDT, of Philadelphia, Pa.—*Improvement in Apparatus for Cutting Button Holes.*—Patent dated December 18, 1860.—The claim and engravings explain the nature of this invention.

Claim.—An instrument for cutting button holes, combining the levers *A* and *C*, when arranged and jointed in the manner described, and actuating the cutter *B*, substantially as and for the purposes set forth.

No. 30,926.—ISAAC MIERS, of Clay Lick, Ohio.—*Improvement in Cultivators.*—Patent dated December 18, 1860.—This invention consists in the arrangement and combination of parts.

Claim.—The arrangement of the longitudinally adjustable side beams *C D*, straps *a a*¹ *b b*¹, and adjusting plate *d*, with the centre beam *B*, ploughs *E F G*, adjustable handles *h h*, and standards *y y*, all as shown and described, for the purposes set forth.

No. 30,927.—PHILO P. MILLS, of Washington, Ohio.—*Improvement in Sugar Cane Leaf Strippers.*—Patent dated December 18, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The described leaf stripper for sorghum or sugar cane, consisting of two or more elastic blades *D E*, and the semi-circular plates *E*, the whole being combined and arranged on the block or frame *A*, for the purpose and in the manner set forth and explained.

No. 30,928.—D. K. NIXON, of Sandyville, Ohio.—*Improved Device for Preventing Hogs from Rooting.*—Patent dated December 18, 1860.—This invention consists of an iron, or metallic piece *A*, having a hole *B*, of a proper shape and size, to permit the upper front part of the snout of the hog to be drawn through it, when two iron pins *a b* are passed up through the part of the snout, which is drawn through the hole *B*, and bent over the top of *A*.

The inventor says: I *claim* the combination of the metallic part A, having the opening B, with two or more pins, or wires, substantially as and for the purposes set forth.

I also claim the curved, or projecting points C C, with the lower part of A, as set forth.

I further claim bending the lower ends of the pins *m*, as shown at *c*, for the purposes set forth.

No. 30,929.—W. H. PEASE, of Dayton, Ohio.—*Improvement in Tobacco Cutters*.—Patent dated December 18, 1860.—E represents a shaft which is secured horizontally in bearings attached to the frame A. Upon this shaft are secured the revolving knives F F, and the screw thread G. The thread G works between the teeth, or cogs, upon the gear wheel H, and serves to propel said wheel.

Claim.—In connection with the endless belts C C¹, arranged as described, and the throat *d*, the revolving knives F F, and screw thread G, the same being arranged and made to operate substantially as and for the purpose specified.

No. 30,930.—JOHN PIKE, of Syracuse, N. Y.—*Improved Churn*.—Patent dated December 18, 1860.—This invention consists in the combination and arrangement of parts.

Claim.—The combination and arrangement of the adjustable convex disk D, concavo-convex disk E, with the radial beaters on each, as described, together with the wings *d d*, shaft C, and dashers *x x*, &c., when used for the purposes specified.

No. 30,931.—ROBERT PLEWS, of Smithfield, R. I.—*Improved Cylinders for Spinning Frames*.—Patent dated December 18, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The improvement in the process of manufacturing tin plate cylinders, as described, consisting in perforating the edge of each plate, of which the several sections of the cylinders are composed, with holes, whereby on the application of heat the air is expelled and the soldering metal is permitted to flow over the entire surfaces in contact.

No. 30,932.—F. W. ROBINSON, of Richmond, Ind.—*Improvement in Grain Separators*.—Patent dated December 18, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* obtaining a separate and independent discharge of grain from the grain carrier D, and the straw carrier E, by means of a division board *a*, and the inclined bottom board G, the upper line of the straw carrier E being arranged below the plate of the cellular grain carrier D, so as to obtain a fall between the carriers, substantially as specified.

No. 30,933.—JOHN S. ROYCE, of Cuylerville, N. Y.—*Improvement in Harvesting Machines*.—Patent dated December 18, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the downward curved, arched metallic frame A, constructed as described, in combination with the driving wheel D, the pinion, or pitman shaft P, and its rod, the cutting apparatus and wheel W, for the purpose set forth and substantially as described.

Second. The arched projection of the frame F, in combination with the adjustable cross piece C¹, and its friction wheel W¹, and the rod *r*, for the purpose set forth and substantially as described.

No. 30,934.—GEORGE M. SELDEN, of Troy, N. Y.—*Improvement in Eaves Troughs*.—Patent dated December 18, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The air passages, or flue spaces, with an eaves trough, and its conductor located upon a building as usual, and with a warm air apartment, or hot air furnace, for the purpose of preventing the damage which ordinarily results to the building from the freezing within and consequent overflowing of the conductor and eaves trough by the water which sometimes runs from melting snow, or ice, on the roof, in freezing weather.

No. 30,935.—SMITH A. SKINNER, of West Berkshire, Vt.—*Improvement in Fountain Pens*.—Patent dated December 18, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the combination and arrangement of a valve *f*, separate from the agitator *h*, with a spring pen carrier B, arranged with respect to the agitator *h* and the branch *e*, provided with a valve opening and extended from the ink fountain, as described.

I also claim the improved mode of making the spring tongue *k*, viz: with corrugations, the same being for the purpose described.

No. 30,936.—J. J. SLOCUM, of New York, N. Y.—*Improved Rotary Engine*.—Patent dated December 18, 1860.—This invention consists in the employment of a rotary winged abutment, in combination with a rotary piston, in such a manner that by imparting to said abutment a rotary motion, at certain intervals, the piston is allowed to pass by unobstructed; it consists also in arranging on the shaft of the piston a notched disk with a spring catch, in combination with two sets of rollers attached at different distances from its centre to a plate that is secured to the axle of the rotary abutment.

The inventor says: I *claim*, first, the arrangement of the rotary winged abutment E, in combination with the rotary piston A, constructed and operating as and for the purpose set forth.

Second. The combination and arrangement of the notched disk I with the spring catch J, plate H, with the rollers *b* and *e*, with rotary abutment F, constructed and operating substantially as and for the purpose set forth.

No. 30,937.—ERASTUS N. STEERE, of Providence, R. I.—*Improvement in Oiling Spindles*.—Patent dated December 18, 1860.—This invention consists in connecting the step and bolster of a spindle by means of a tube, so as to form a reservoir or chamber for containing oil, and in which the lower part of the spindle is enclosed and revolves submerged in oil.

Claim.—The tube B, or its equivalent, constructed and arranged with the step and bolster of a spindle, substantially as described, for the purpose specified.

No. 30,938.—SIDNEY M. STONE, of New Haven, Conn.—*Improved Means for Ventilating Buildings*.—Patent dated December 18, 1860.—This improvement consists in admitting pure air through the external wall at or above the apartment to be ventilated.

Claim.—The use of the pure air passage at A, in combination with the passage E E and smoke pipe G, when the whole is constructed, arranged, and fitted to produce the result described.

No. 30,939.—CLAUDE STUREL, of New York, N. Y.—*Improvement in Fire Escapes*.—Patent dated December 18, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the platforms D alternately on opposite sides of the frame work, and holding them rigidly parallel to the deck of the wagon in all conditions of the frame, by means of the bars *d*, or their equivalents, substantially as and for the purpose set forth.

No. 30,940.—HORACE TUPPER, of Buffalo, N. Y.—*Improvement in Turnouts for Street Railroads*.—Patent dated December 18, 1860.—A B represents a switch rail, embracing the principle of this improvement.

Claim.—The inclined wave or swell D, in combination with the rails A D and F, operating in the manner and for the purposes set forth.

No. 30,941.—D. T. WARD, of Mansfield, Ohio.—*Improved Churn*.—Patent dated December 18, 1860.—This invention consists in constructing and arranging the several parts of the churn.

Claim.—The disk, or wheel C, constructed as described, and in connection therewith the rim, or collar D, arranged in the manner and for the purpose specified.

No. 30,942.—SETH WHEELER, of Albany, N. Y.—*Improvement in Ash Sifters*.—Patent dated December 18, 1860.—This improvement consists in the use of a reciprocating, corrugated sieve, enclosed in a suitable case or box, and placed in a diagonal position, said sieve being hung on pivots, or journals, and agitated by means of a lever or crank, rod and treadle, working on the outside of said case or box.

Claim.—The use of lever G, treadle F, and spring E, when used in combination with the sieve B, substantially as and for the purpose specified.

No. 30,943.—CHRISTIAN K. HOSTETTER, of East Donegal Township, Pa., assignor to JACOB R. HOFFER, of Mount Joy, Pa.—*Improved Bag Holder and Conveyor*.—Patent dated December 18, 1860.—This invention consists in the combination and arrangement of parts.

Claim.—The sliding frame E, held and operated by the cord H, friction and ratchet pulley I, spring pawl J, and cord tightener L, together with the bag rest B, the whole mounted on wheels D, substantially as described.

No. 30,944.—HIRSCH HEINEMANN and JACOB BUSER, of New York, N. Y., assignor to HIRSCH HEINEMANN, aforesaid.—*Improvement in Machines for Covering Cord*.—Patent dated December 18, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim*, first, the arrangement of the revolving creel *f* to twist the strand, with a revolving carrier plate *e*, for laying the silk or other fibres upon the outside of said strand, when each has a separate revolving motion, so as to make different sizes and characters of strands, as set forth.

Second. We claim the construction of the cap *l*, and jaws *o o*, in combination, to guide the strand, so that the covering material may be laid evenly thereon, as set forth.

Third. We claim the revolving bobbin *t*, and fly frame, acting as specified, in combination with the covering apparatus, to twist in a cord, or "cut" the strand as it passes from the covering apparatus, as set forth.

No. 30,945.—XAVIER KARCHESKI, of New York, N. Y., assignor to LOUIS T. VALENTINE, of said New York.—*Improvement in the Manufacture of Vegetable Parchment*.—Patent dated December 18, 1860.—The claim shows the nature of this improvement.

Claim.—The application, to certain parts of the paper, of starch, or some other gelatinous substance, either plain or colored, substantially as set forth, for the purpose of producing in the parchment an indelible water mark.

No. 30,946.—PETER KEFFER, of Reading, Pa., assignor to himself and D. H. ULRICK, of Berks County, Pa.—*Improvement in Car Brakes*.—Patent dated December 18, 1860.—This invention consists of certain devices for releasing the brakes after the train has been stopped by the movement of the sliding rods; also, in a certain arrangement of levers and rods connected with the brake beams, whereby the brakes may be readily applied, no matter what position the trucks may assume on turning the curves of a track.

The inventor says: I *claim*, first, the spring sliding rod and its projection *q*, in combination with the slotted arms *T* and *T*¹, and the frame *X*, with its roller *e*, the said arms being operated, and motion being communicated from the said frame to the brake bars, by the devices described, or their equivalents.

Second. The levers *K* and *K*¹, hung to the pin *I*, on which the truck turns, in combination with the rods *L* and *L*¹, and rods *M* and *M*¹; the whole being arranged and operated as and for the purpose specified.

No. 30,947.—JOHN L. MAHAN, of Philadelphia, Pa., assignor to D. STUART and R. PETERSON, of said Philadelphia.—*Improvement in Gas Stoves*.—Patent dated December 18, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The inner chamber *D*, diminishing in size towards its mouth *d*, the whole outer chamber *C*, the plain plate *F*, the plate *m* of wire gauze, or its equivalent, and the hot air passage *i*, when the said plain plate forms a continuation of the wire gauze, and when the whole of the above named parts are arranged in respect to each other, as and for the purpose herein set forth.

No. 30,948.—ANDREW PARKINSON, of Norwich, Ct., assignor to JAMES PARKINSON, of Newark, N. J.—*Improvement in Looms*.—Patent dated December 18, 1860.—This invention consists in combining, with the lay and back of the reed, a comb, which passes between the warp threads, and in so doing either lays the broken end, or loose thread, in line parallel with the other warp threads.

Claim.—The employment of a comb, substantially such as described, in combination with the lay of a loom, substantially as and for the purpose specified.

No. 30,949.—C. P. S. WARDWELL, of Lake Village, N. H., assignor to SAMUEL H. DOTEN, of Plymouth, Mass.—*Improved Comb Cleaner*.—Patent dated December 18, 1860.—This invention consists in constructing and arranging the several parts of a comb cleaner, so as to be easily trimmed with thread, and to bring several strands parallel, or nearly so, so as to quickly and effectually clean a comb.

Claim.—As a new article of manufacture, a comb cleaner, constructed substantially as described and set forth.

No. 30,950.—PARKER WELLS, of Middletown, Mass., assignor to ELMER TOWNSEND and WILLIAM WELLS, of Boston, Mass.—*Improvement in Pegging Machines*.—Patent dated December 18, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* changing the supply of pegs of one length for others of a different length by substantially the means described for changing the position of the peg wood channels *v v*¹.

Also the described arrangement of the awl and driver bars *h* and *g*, which consists in permitting them to oscillate in the top of the head *a* when they are connected with a slide *l*, which is made to reciprocate, substantially as and by the means described.

Also the arrangement shown and described of the shaft *e*, both with regard to its direction

of rotation and position, by which the usual gauge on the pegging head *a* is kept pressed against the edge of the sole.

And I claim also the arrangement described by which the whole of the peg-driving mechanism is changed in its position relative to the pinion *b*, which actuates the boot or shoe carrier, for the purpose of altering the angle at which the pegs are set in the work.

No. 30,951.—CHARLES E. BERTRAND, of New York, N. Y.—*Improvement in Tanks for Crystallizing Sugar*.—Patent dated December 18, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim the method described of extracting the crystallizable sugar from the secondary products or drainings of ordinary sugar moulds by the employment of a capacious tank, having combined with it a perforated discharge tube, or plug, or stopper, both or either capable of rotation, the whole being constructed and arranged substantially as set forth, and operated in the manner and for the purpose specified.

No. 30,952.—LEVI BISSELL, of North Bergen, N. Y.—*Improvement in Stove Pipes*.—Patent dated December 18, 1860.—This invention consists in so constructing a stove pipe safe in two parts that it can be readily adjusted to accommodate itself to any thickness of wall; also in the employment of slides between the two pipes for the purpose of affording ventilation to the room.

Claim.—The heads of the safe as constructed in combination with registers and inside pipes *g g*, when said pipes are provided with ventilating holes, and all arranged as and for the purpose set forth.

No. 30,953.—JOHN BLUE, of Covert, N. Y.—*Improvement in Harvesters*.—Patent dated December 18, 1860.—This invention consists in combining a knee joint, having a spring catch for holding the joint in position upon one of the levers forming the joint, with reel standards hinged on bearings of hooks or bolts, arranged in line with the shaft of the wheel directly driving the reel, for the purpose of permitting the movement of the standards on the hinge without deranging the band or gear driving the reel.

Claim.—The combination of the knee joint *i* with the reel standards *f f*¹, shaft *B*, and bearings *k k*¹, when the several parts are arranged for operation in the manner described, for the purpose specified.

No. 30,954.—GABRIEL BOOS, of New York, N. Y.—*Improvement in Machines for Enamelling Mouldings*.—Patent dated December 18, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement and construction of the front piece *A* and side frames *C C*, in combination with the guide pieces *J J*, for the purpose of changing the machine easily to any width of moulding, as well as to make thereby the surface of the moulding to act as guide for the machine, substantially as described.

No. 30,955.—E. D. BOOTMAN, of Janesville, Wis.—*Improvement in Automatic Attachment to Keyed Musical Instruments*.—Patent dated December 18, 1860.—This invention consists in making a machine with a peculiarly constructed cylinder, having mechanical devices for operating the same, that may be attached to any organ, piano, or melodeon, and may be set to play any piece of music that may be desired.

The inventor says: I claim, first, the use and application of the spherical balls *i*, or their equivalents, substantially as described and for the purpose described.

Second. I claim the construction and use of a cylinder made of any suitable material, with a continuous spiral groove cut around the cylinder similar to a screw, which groove is crossed at proper distances by like grooves running parallel with the shaft or axis of the cylinder, thereby forming at the crossings of the grooves proper receptacles for the balls *i*, substantially as described and for the purpose described.

Third. Employing a belt or cloth *v*, in combination with rollers to keep the balls *i* in their places on the cylinder, and to propel the cylinder in performing music, substantially as described, or any arrangement accomplishing substantially the same object.

Fourth. The side or lateral movement of the sliding carriage *G*, in combination with the ways *X X*, substantially as and for the purpose set forth.

Fifth. The combination of the keys or levers *k k*, grooves *l l*, pins *t t*, cups *J*, and conductors *K*, or their equivalents, when used substantially as shown and for the purpose described, or any arrangement accomplishing substantially the same thing.

Sixth. I claim the arrangement of the compound levers *M* in connection with the oscillating lever *K*, or their equivalents, substantially as shown and for the purpose described.

Seventh. The use and application of the screw *x* and slide *t*, or their equivalents, when used in connection with a cylinder to give a longitudinal motion to the same as it revolves, substantially as and for the purpose described.

Eighth. The arrangement and combination of the lever *m*, spring catch *n*, weight *o*, and pulley *X*, substantially as described and for the purpose set forth.

Ninth. I claim the manner of raising the hammer *U* to strike the strings or keys of the piano, substantially as described, or any arrangement substantially the same.

Tenth. I claim the method described of pressing down the keys upon the organ or melodeon by means of the levers *v* and *w*, pins *t t*, wheel *m m*, or any arrangement accomplishing the same thing.

Eleventh. Finally, I claim the application and use of the devices composing my attachment, substantially as described, in combination with an organ, piano, melodeon, or other instrument to which it may be applied to produce or perform music.

No. 30,956.—LEWIS H. BOWMAN, of Norristown, Pa.—*Improvement in Operating the Valves of Steam Engines*.—Patent dated December 18, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim, first, the reciprocating box *C*, its spring sliding bars *F* and *F*¹, with their inclinations, in combination with the valve levers *K* and *K*¹ and their rollers *q*, the whole being arranged as substantially set forth.

Second. I claim the spring sliding bars *E E*¹, each having a projection *m*, in combination with the bell crank levers *G* and *G*¹ and the sliding block *I*, the position of the latter being regulated by the governor, and the whole being arranged for joint action, substantially as and for the purpose set forth.

Third. The vibrating arm *Q* with its segment *b* and adjustable curved blocks *r* and *r*¹, in combination with the exhaust valve levers *N* and *N*, the whole being arranged and operating substantially as specified.

No. 30,957.—BENJAMIN F. CAMPBELL, of Roxbury, Mass.—*Improved Steam Boiler*.—Patent dated December 18, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim, first, the combined arrangement of two wings *E*, containing the tubes *I*, with a single fire box, when the said wings project equally from either side of the fire chamber over the grate, as and for the purposes set forth.

Second. I claim the perforated plate *L*, for bridging the crown sheet *E*, substantially as set forth.

No. 30,958.—J. A. CHAPMAN, of Poquetanuck, Conn.—*Improvement in Machines for Winding Woolen Rovings*.—Patent dated December 18, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim, first, the arrangement of the wheel *L*, bar *Q*, sliding frame *D*¹, swinging frame *D*, guide bar *l*, and sliding bar *S*, operated as shown, or in any equivalent way, for the purpose of shifting the frame *D*¹ and presenting the empty spools consecutively before the guide *N*, to receive the roving *V*.

Second. Operating, for the purpose specified, the bar *Q* through the medium of the spring *a*¹, ratchet *N*^{*} with pin *w* attached, and the pawl *v*, arranged as described.

Third. The employment of a series of spools *F*, when placed on a common shaft *E* and filled or wound consecutively by a continuous roving, substantially as set forth.

No. 30,959.—ELISHA CLARK, of New York, N. Y.—*Improvement in Copying Presses*.—Patent dated December 18, 1860.—This invention consists in the arrangement of the parts of the machine named in the claim.

Claim.—The arrangement of the anti-pressure bridge *C*, studs *a*, screw *S*, and nut *F*, with the plates *B B*¹, rods *f*, and springs *s*, in the manner and for the purpose shown and described.

No. 30,960.—JUD CRISSEY, of Chatfield, Minn.—*Improvement in Water Wheels*.—Patent dated December 18, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim, first, the employment or use, with one or more wheels *D E*, of a series of concentric gates or cylinders, constructed as described, and arranged relatively with the buckets *d*, to operate as and for the purpose set forth.

Second. The arrangement of the wheels *D E*, fitted in a frame or box *B* in a flume or penstock *A*, when provided on one and the same shaft *C*, with concentric cylinders or gates, connected as shown, so that the gates of both wheels will be operated by adjusting the outer one of the upper wheel, essentially as and for the purpose set forth.

No. 30,961.—JOHN G. DUNHAM, of Raritan, N. J.—*Improvement in Mowing Machines*.—Patent dated December 18, 1860.—The claim and engravings explain the nature of this invention.

The inventor says; I claim, first, the construction of a finger beam *D*, or its equivalent,

with the hinged piece F, its projection K, adjustable piece F, and its shoulder K, for the purpose set forth.

Second. I claim the combination of shoe E, truss rod G³, and piece H, with finger beam D and parts F F¹ and G, arranged in relation to each other and the main frame, substantially as shown and described.

Third. I claim in a mowing machine the combination of the following elements, viz: A main frame, two independent driving and supporting wheels, a castor wheel, a hinged folding finger beam, and a knife reel, said parts being arranged in relation to each other, and operating substantially as described.

Fourth. I claim the mechanism for throwing the cutter out of action, substantially as described, and as shown in Fig. 6.

Fifth. I claim the combination, with the main frame and supporting wheels, of a metallic axle, or journal piece, constructed substantially as described, and as shown in Figs. 1 and 4, for the purpose set forth.

Sixth. I claim the combination, with the main frame of a mowing machine, of a "knife reel" and a hinged folding finger beam.

No. 30,962.—JOSEPH D. TORREY, of Lewistown, Pa.—*Improvement in Machines for Hulling Clover*.—Patent dated December 18, 1860.—The object of this invention is to provide an improved clover huller and cleaner, for beating the heads of the clover, by such improved devices therefor as shall beat out all the seeds, and at the same time avoid breaking any of them; and for cleaning and for clearing the same from chaff and dust.

The inventor says: I *claim*, first, the combination of the peculiarly shaped concave with the peculiarly shaped beaters, or spikes, for the purposes and substantially as described.

Second. I claim the arrangement of the sieves s s, the apron a, and the movable roller R, actuated simultaneously by the means of the eccentric g, all constructed and operated as and for the purpose set forth.

Third. The arrangement of the peculiarly shaped concave and beaters with the endless apron, for the purpose and substantially as described.

No. 30,963.—JOHN B. GEISINGER and D. H. S. WILLIAMS, of Montville, Ohio.—*Improvement in Cultivators*.—Patent dated December 18, 1860.—This invention consists in the arrangement of the devices.

Claim.—The arrangement of the curved slotted bar C, curved slotted braces M M hinged to bar J, standards N N, shares Q Q, eye bolts S S, links R R, bars K, bolt L, beam A, and handles E, the whole being constructed substantially as described.

No. 30,964.—CHARLES GRAHAM, of Scranton, Pa.—*Improvement in Spring Balances for Safety Valves to Boilers*.—Patent dated December 18, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the employment, in combination with the spring of a spring balance for safety valves, of an eccentric e, and lever F, applied to operate substantially as specified for the purpose set forth.

Second. The arrangement of the eccentric shaft E, spring G, levers B B, cross bar D, and the pressure bar H, with its screws and nuts f f, g g, substantially as described, in combination with each other, and with a bed plate A, or other equivalent base or support.

No. 30,965.—JAMES S. GRAY, of New York, N. Y.—*Improvement in Vapor Lamps*.—Patent dated December 18, 1860.—This invention relates to that class of vapor lamps in which the fluid, from which the vapor is generated, is contained in a reservoir situated at a distance from the burner, and conveyed to it by a pipe, in order that the main body of the fluid may be exposed to the heat of the flame, and thereby prevent accidents.

Claim.—The combination of the wick tube C, bracket D, conductors E, and heater cap F, when arranged for joint operation, substantially in the manner described, for the purpose set forth.

No. 30,966.—JOSEPH GUM and ST. CLAIR GUM, of Marseilles, Ill.—*Improvement in Cultivators*.—Patent dated December 18, 1860.—This invention relates to a new arrangement of parts by which to elevate the several ploughs or cultivators from the ground, and to move them laterally to the right or left, as the irregularity of the planting of the rows of corn may require; also, to such an arrangement of parts as permits the cultivation of two rows of corn at once.

The inventors say: We *claim* the lever E, in combination with the levers L L, the open slot standards S S, and the slots on the lower side of the cross piece H, by which to control the central movement of the ploughs, when arranged as set forth, as is substantially described.

We claim the driver's seat D, in combination with the several elements of the preceding claim, when arranged as set forth and substantially as described.

No. 30,967.—JACOB HÆGE, of Shiloh, Ill.—*Improvement in Gang Ploughs*.—Patent dated December 18, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the employment or use of vertical pivots passing through the centre of the axle, in combination with chains *c* and *f*, as and for the purpose described.

Second. The arrangement of the hinged slotted standards J, in combination with the screw rods *k*, guards *n*, and nuts *m*, and with the adjustable plough shares D, all constructed and operating in the manner and for the purpose set forth.

Third. The arrangement of the swinging rods *f*¹, in combination with the lever F, and beams C, constructed and operating as and for the purpose specified.

Fourth. The arrangement of the belly strap I, in combination with the lever F, treadle H, and beams C, constructed and operating substantially in the manner and for the purpose described.

No. 30,968.—CHARLES E. HASKINS, of Providence, R. I.—*Improvement in Shirt Studs*.—Patent dated December 18, 1860.—The claim and engravings explain the nature of this invention.

Claim.—An improved shirt stud, not only with its shank tubular and recessed, as explained, but with a lever applied and arranged with respect to such shank, as described, and provided with a spring arranged in the shank and operating so as to maintain the lever at right angles with the shank, under circumstances as set forth.

No. 30,969.—AUGUSTUS H. HEWS, of Cambridgeport, Mass.—*Improvement in Slides for Watch Ribbons*.—Patent dated December 18, 1860.—This invention consists in making the slide of two parts hinged together at one edge and clasping, or stretching together at the opposite edge, so that it may be opened to introduce the ribbon and then be shut over it, while a pin within the slide serves to secure the two ends of the ribbon together.

Claim.—The slide A and pin *c*, operating substantially as described.

No. 30,970.—JASPER JOHNSON, of Geneseo, N. Y.—*Improved Butt Hinge*.—Patent dated December 18, 1860.—This invention consists in uniting the leaves by a tapering headed pin having a small groove around it and beneath the head to receive the point of a pin and prevent the removal of the tapering pin when inserted.

Claim.—The combination of the leaves A B, tapering and grooved pin P, second pin *i*, stud *a*, and cavity B, constructed, arranged, and operating as and for the purpose set forth.

No. 30,971.—NELSON JOHNSON, of Jasper, N. Y.—*Improvement in Water Wheels*.—Patent dated December 18, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The inclined buckets *f* being of concave form in their horizontal section, and of gradually decreasing width from top to bottom, in connection with the inclined or bevelled lower rim *h*, essentially in the manner and for the purpose set forth.

No. 30,972.—SOLOMON KEPNER, of North Coventry, Pa.—*Improvement in Detaching Horses from Carriages*.—Patent dated December 18, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The combination of the bar, figure 9, and the revolving swingle tree, with its two hooks and guide, arranged as described, for the purpose set forth.

No. 30,973.—MOSES KLEEMAN, of Columbus, Ohio.—*Improvement in Glass Cutters*.—Patent dated December 18, 1860.—The inventor says: In making the cutter I fit a cap of brass or other suitable metal *d*, having a hole through it opposite the socket through which the point of the diamond projects, the cap tightly fitting around the diamond and securely holding it in place; the cap is fastened down by one or more rivets, the holes through the cap and stock being "draw bored," so as to draw the cap down tight and fast.

Claim.—The combination of the socket and cap, substantially as and for the purposes set forth.

No. 30,974.—JOSEPH H. KNIGHT, of Newburyport, Mass.—*Improvement in Shoe Tacks*.—Patent dated December 18, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A shoe tack, constructed with an elongated inclined head B, as shown and described.

No. 30,975.—F. W. KROEBER, of Forbestown, Cal.—*Improved Wrench*.—Patent dated December 18, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The application of the lever and the curved ratch to the adjustment of the jaws of the wrench as described.

No. 30,976.—GEORGE W. LATHROP, of Weedsport, N. Y.—*Improvement in Exhaust Pipes for Locomotive Engines*.—Patent dated December 18, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination of an adjustable bevelled guide flange or lug G, and adjusting rods I I, which extend out beyond the front of the smoke arch A, with the seat E and stationary bevelled lug F, of the exhaust pipes D D and slide J, that carries the variable exhausting nozzles M, substantially as and for the purpose set forth.

Second. In combination with the exhaust pipes D D, which branch out towards the sides of the smoke arch, and terminate in a slide seat E that runs across the arch, I claim the combined arrangement of a slotted link K, that takes hold of the remotest end of the nozzle slide J, a vertical rod *d*, two horizontal crank arms *e f*, set at right angles to one another, and a horizontal longitudinal lever L, substantially as and for the purpose set forth.

No. 30,977.—WILLIAM MALLERD, of Bridgeport, Conn.—*Improved Gas Burner Regulator*.—Patent dated December 18, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* making the inner tube C vertically adjustable in its socket A, substantially as shown and described, so that the flow of gas through the orifices of said tube may be increased or diminished, so as to bring a greater or less number of the orifices above the head of the socket, all as set forth.

I also claim the arrangement of the escape orifices of said tube C, on varying horizontal planes, as and for the purpose set forth.

I also claim the exterior gradation of said tube C, as shown and described, so that the quantity of gas which issues through the orifices when the tube is set to any given height will be indicated to the eye, all as set forth.

No. 30,978.—R. C. MAUCK, of Harrisonburg, Va.—*Improvement in Machines for Cleaning Grain*.—Patent dated December 18, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the combination of the inclined cylinder A, and rotary longitudinal buckets or scoops M N, constructed and operating in connection with a fan blast, substantially in the manner set forth, to subject the grain to a succession of falls in its passage to the lower end of the cylinder, and repel the lighter refuse at the upper end.

Second. The right and left flanges D D¹, in the described combination with the reel B C N and inclined cylinder A, for the purposes explained.

Third. The transverse checks J, in the described combination with the inclined longitudinal buckets M N and fan E, for the purpose set forth.

Fourth. The guard O, applied between the fan E and spout L, substantially as and for the purposes explained.

No. 30,979.—PATRICK FRANCIS MILLIGAN, of Baltimore, Md.—*Improvement in Railway Signals*.—Patent dated December 18, 1860.—This invention consists in the arrangement and combination of parts.

Claim.—The combination and arrangement of the series of wheels A B C D, and pinions *b c d*, axle *a*, ropes or chains *x y*, attached to spans *n n*, lamps or signals E G, pole P, with ratchet rack *s* and spring *r*, with suitable framing, the whole constructed and operating substantially as and for the purpose specified.

No. 30,980.—JOHN B. MURRAY, of New York, N. Y.—*Improvement in Envelopes*.—Patent dated December 18, 1860.—Letters A represent openings in either one or both ends of the envelope. The opening is not quite the width of the end of the envelope.

Claim.—The openings A, in one or both ends of the envelope, substantially as described, and for the purposes set forth.

No. 30,981.—RICHARD C. NASH, of Somerville, Tenn.—*Improvement in Cotton Seed Planters*.—Patent dated December 18, 1860.—This invention consists in the combination and arrangement of parts.

Claim.—The combination and arrangement of the hinged drill tooth G and driving wheel B, of the seeding wheel M, with alternate pins *r r* and blades *s s*, substantially as and for the purposes herein specified.

No. 30,982.—M. F. NORACONK and DANIEL HOATS, of Milton, Pa.—*Improvement in Ma-*

chines for Hulling Clover Seed.—Patent dated December 18, 1860.—This invention consists in the use of a rotating and two stationary hulling disks, and a fan and screen, arranged whereby the desired work is performed.

The inventors say: We *claim* first, the rotating and stationary hulling disks *a d f*, in connection with the screen *G* and fan *E*, arranged for joint operation, as and for the purpose set forth.

Second. Placing the suspended screen *G* on the shaft *H* for the purpose of giving the former the double vibrating movement as described.

No. 30,983.—GEORGE W. PITTOCK, of Union Mills, N. Y., assignor to himself and MERCHANT PERRIGE, of Saratoga, N. Y.—*Improvement in Coal Sifters.*—Patent dated December 18, 1860.—This invention consists in the employment of the screw shaft and lever for operating the revolving sieve, also, the same in combination with other devices.

Claim.—The combination of screw shaft *d*, revolving sieve *B*, lever *a*, and hopper *D*, when the whole shall be constructed and arranged substantially as and for the purpose described.

No. 30,984.—IRA C. PRATT, of Morton, Ill., assignor to himself and THOMAS PARKER, of said Morton.—*Improvement in Bee Hives.*—Patent dated December 18, 1860.—This invention in the use of two sliding, or adjustable boxes, in combination with the main hive; also, the same in combination with a frame which shall be provided with troughs.

Claim.—The main hive *A*, frame *B*, and sliding boxes *E* and *F*, when combined, and for the purpose set forth.

No. 30,985.—THOMAS L. PYE, of New York, N. Y.—*Improved Brackets for Curtain Cords.*—Patent dated December 18, 1860.—This invention relates to the bracket carrying the sheeve, or roller, around which the cord passes, and which bracket keeps the cord tight.

Claim.—The divided, or split pipe *f*, and tapering socket *g*, combined with the rod *e*, carrying the roller *d*, substantially as specified.

No. 30,986.—JOHN REYNOLDS, of New York, N. Y.—*Improvement in Steam Ploughs.*—Patent dated December 18, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim*, first, the arrangement and combination of the plough frame *A* with ploughs *A*¹, vertical slotted standards *c*, link *d*, rock shaft *e f*, grooved disk crank *g*, link *d*¹, chains, or cords *J J*¹, and windlass shaft *K*, substantially in the manner and for the purpose described.

Second. The arrangement and combination of the fast spur wheel *R*, sliding lever clutch *T t t*, and loose wheels *C u u v v*, substantially in the manner and for the purpose described.

Third. The arrangement of the plough frame *A* with the ploughs *A*¹, boiler *D*, engine cylinder *D*¹, wood receptacle *F F*¹ *F*², water tank *E*, specified mechanism for throwing the engine in connection with the carriage *B*, and the mechanism specified for supporting and adjusting the plough frame and ploughs, the whole constructed and operating together in the manner described.

No. 30,987.—EZRA RIPLEY, of Troy, N. Y.—*Improved Wrench.*—Patent dated December 18, 1860.—This invention consists in holding, releasing, and adjusting the sliding jaw of wrenches, by means of a set screw operating in combination with said sliding jaw and an inclined plane.

Claim.—The manner of adjusting, holding, and releasing the sliding jaw *C*, by means of the set screw *E*, in combination with the sliding jaw *C*, and inclined plane *D*, combined and operating in the manner substantially as described and shown.

No. 30,988.—JOHN RUSSELL, of Troy, N. Y.—*Improvement in Stove Covers.*—Patent dated December 18, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A stove cover, composed of an upper supporting and cooking plate *A*, and a lower protecting plate *B*, the lower plate being made with ribs *e* on its upper side, and secured to, but apart from, the upper plate, by means of an interwoven block, or projection *C*, and a bolt or rivet *F*, both arranged together at or near the middle of the plates.

No. 30,989.—JOSEPH RYDER, WILLIAM CARPENTER, and H. R. JOLLEY, of Clinton, La.—*Improvement in Cotton Cleaners.*—Patent dated December 18, 1860.—This invention consists in the combination of three cylindrical chambers with passages, revolving feed knocker, revolving fan blower, revolving beater, and a dust flue.

Claim.—The combination of the chambers *A B C d e f g*, revolving shaft *H*, with feed

knockers *i i*, and fan blades *j j*, and the dust flue *G*, the whole constructed and arranged and operating substantially in the manner and for the purpose described.

No. 30,990.—HORACE SMITH and DANIEL B. WESSON, of Springfield, Mass.—*Improvement in Revolvers*.—Patent dated December 18, 1860.—The claim and engravings explain the nature of this invention.

The inventors say: We *claim*, first, the combination of a revolving cylinder, having its chambers extending entirely through the block, with an unbroken recoil shield having a projection on its face, as described, for the purpose set forth.

Second. The combination of the barrel, hinged to the lock plate with a spring catch *b*, arranged with end projections to grasp the barrel and plate, substantially as described, for the purpose as set forth.

No. 30,991.—JOHN SOLAN, of Fredericksburg, Va.—*Improved Shutter Operator*.—Patent dated December 18, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the levers *E*, having a sliding and vibrating motion on their fulcrum, in combination with the slotted and notched plate *H*, for opening window shutters and securing them when open, substantially as specified.

No. 30,992.—SAMUEL SOLLIDAY, of Sumneytown, Pa.—*Improved Steam Boiler*.—Patent dated December 18, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The arrangement of the elevated fire box, descending flue pipes, and surrounding water space, in combination with the arrangement for the artificial draught, and the exit passages, when located within a tight shell, or jacket, the whole being constructed substantially as and for the purpose set forth.

No. 30,993.—HENRY D. STOVER, of New York, N. Y.—*Improvement in Wood Planing Machines*.—Patent dated December 18, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the combination of cutting cylinder *O* and cross head *M* with two or more screws *E* for raising and lowering the cutting cylinder evenly and parallel to the face of the platen.

I also claim so pocketing or encasing the raising and lowering screws *E* in the uprights *C* that dust and shavings will be effectually excluded, whether the machine is in operation or not.

I also claim so constructing the cutting cylinder *O* as to receive four or more cutting blades *P*, each imparting a shearing or drawing stroke or cut, and at the same time for convenience in construction and ease in sharpening and securing the blade to the head.

I also claim forming the portion of the cutter head; immediately back of the edges of the cutting blades, an angle varying from 50° to 45° from the face of the cutting blades to constitute a solidly variable and efficient cap to the cutting blades.

I also claim so constructing, connecting, and arranging the sliding journal boxes *T* with cross head *M*, which carries the cutting cylinder *O* by means of rods *U*, that when the cutter head is raised or lowered these journal boxes will move, so as to always retain a precisely equal distance between the drive pulleys and the driven pulleys on the cutter head for equal tension of the belts.

I also claim feeding the platen back and forth by friction slide *A* and wheel *D*, and rack *B* and pinion *C*, for the purposes set forth.

I also claim reversing the movement of the platen by means of screw *M* and wheel *O*¹ for forcibly engaging the rack by its pinion on the friction side by its wheel.

I also claim sliding, moving, and attaching the cross head *M*, carrying cutting cylinder *O* on and to the uprights *C*, in and by adjustable gib slides *N*.

I also claim pivoting the journal box *H* for the friction feed shaft and giving it a vertical adjustment to both swing and rise or fall with the feed shaft.

I also claim several dogs, operated independently of each other, to effectually hold several pieces firmly to the platen for dressing at the same time, constructed substantially as described.

I also claim sliding the feed rolls into position for use, and removing them from the machine by means of gib slides, so that these rolls are always secured for use and in position out of use by gib slides alone, and yet allow of a free movement, and to require no additional security.

I also claim suspending and moving cross head for cutting cylinder by screws *E*, which are suspended in universal bearings and by universal nuts, to allow of a free untrammelled movement for adjustment and ease in operation, and to secure the cutter head parallel to platen at any elevation from its surface.

I also claim a conducting spout or trough *A*⁴ so connected with cross head or other part as to receive and conduct the shavings from the cutting cylinder and the machine to any

point desired by means of the current of air set in motion by the great velocity of the cutting cylinder.

I also claim an elastic pressure roll C⁴, so combined with a rigid revolving roll D⁴ and scraper F⁴, that either can be used at pleasure, with the elastic pressure roll to plane straight and out of wind.

I also claim the iron upright C¹, constructed with cavity or pocket for reception of elevating screws when combined with bed piece of wood planing machine; all substantially in the manner, or their mechanical equivalent, for the purposes fully set forth and described.

No. 30,994.—ROBERT THOMPSON, of East Davenport, Iowa.—*Improvement in Smut Machines*.—Patent dated December 18, 1860.—This invention consists in the arrangement of the parts of the machine named in the claim.

Claim.—The arrangement of the divided scouring chamber beaters *a*¹, shaft L, fan M, case H, and spout *d*¹, with the spout B, chamber I, treble and screened shoe C, grain passage D, hopper G, and spout *n*; all as shown and described.

No. 30,995.—B. D. TRIPP, of Moravia, N. Y.—*Improved Device for Guiding Diamonds for Dressing Mill Stones*.—Patent dated December 18, 1860.—The claim and engravings show the nature of this improvement.

Claim.—The bar or straight edge D attached to the bed piece A by the parallel arms *g*, and actuated or adjusted by the ratchet wheel *b*, gearing *c* E, and spring F; in connection with the slide G provided with the diamond cutter H; all being arranged substantially as and for the purpose set forth.

No. 30,996.—JOHN J. WATSON, WILLIAM HARDIKER, and THOMAS TOYE, of Buffalo, N. Y.—*Improved Apparatus for Ventilating and Warming Railroad Cars*.—Patent dated December 18, 1860.—The claim and engravings explain the nature of this invention.

Claim.—The employment of the fans D D, pipes E and H, flues P P, registers F F, dampers *d* and *e*, together with furnace G and air space J around said furnace, arranged as set forth, for the purpose of supplying heat and for ventilating the car, substantially as described.

No. 30,997.—ADOLPH E. WENZEL, of New York, N. Y.—*Improved Automatic Lathe Dog*.—Patent dated December 18, 1860.—This invention consists in combining a cam or eccentric with an ordinary lathe dog in such a manner that they will adjust themselves to the diameter of the shaft to be turned, and clutch the said shaft and drive it around in the lathe when it is turned.

Claim.—The combination of the lathe dog A and cam B, substantially as described and for the purpose set forth.

No. 30,998.—LYSANDER WRIGHT, of Newark, N. J.—*Improved Circular Saw Gauge*.—Patent dated December 18, 1860.—This invention consists in the arrangement of the parts named in the claim.

Claim.—The arrangement of the slide B, way A, clamp E, plate F, hinge R, and plate L, connected in the manner and for the purpose set forth.

No. 30,999.—McCLINTOCK YOUNG, JR., of Frederick, Md.—*Improvement in Harvesting Machines*.—Patent dated December 18, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I claim, first, making a finger bar for a harvesting machine out of two bars of about the same size and strength, and placed at a sufficient distance apart to allow the bolts that fasten the fingers thereto to pass through the space between them, and thus save the boring, drilling, and fitting of bolt holes, substantially as described.

I also claim the combination of the yielding plate F, hinged finger bar G, and hinged track cleaver J, for the purpose of allowing the finger bar and track cleaver to be swung around, folded up, and carried upon the machine, substantially as described.

I also claim the combination of the bar E, plate F, lever L, and brace M, for holding the finger bar in a horizontal position, or allowing it to rise at either end independently of the other end, substantially as described.

I also claim a guard, composed of the pieces *j k l*, made and united to a finger beam, such as is described, by a single bolt passing through the space between the two bars of which said finger bar is composed, as set forth and described.

No. 31,000.—HENRY ESSEX, of Haverstraw, N. Y., assignor to THOMAS H. BATES, of New York City.—*Improvement in Sewing Needles*.—Patent dated December 18, 1860.—The claim and engravings explain the nature of this invention.

Claim.—A sewing needle, having a cylindrical head and point, and a body of triangular form, as shown and described.

No. 31,001.—WARREN GALE, Chicopee Falls, Mass., assignor to himself and B. B. BELCHER, of the same place.—*Improvement in Machines for Cutting Straw, &c.*—Patent dated December 18, 1860.—This invention consists in so combining the stud, or centre pin, upon which the lever of the knife is hung, or works, with the mouth piece of the cutting box, that it shall be adjustable, so as to give the knife the necessary side pressure or bearing against the mouth piece of the box, for the efficient performance of its functions.

Claim.—The combination of the stud D, the carrier C, and the mouth piece A A, with the slots for lateral and angular adjustment of the cutter or knife *m m*, to the stationary edges *a a* of the mouth piece A A, substantially as described.

No. 31,002.—FERDINAND WUTERICH, of New York, N. Y., assignor to himself and JOHN M. HATHAWAY, of said New York.—*Improvement in Machines for Making Cigars.*—Patent dated December 18, 1860.—The claim and engravings explain the nature of this invention.

The inventor says: I *claim* the combination of a concave cylinder, to which the two ends of the belt are fastened, and the arched-forming rollers and conical belt stretchers, substantially as and for the purposes described.

I also claim making the arch-forming rollers of a series of segments, or sleeves, that can move independently of each other, so as to accommodate itself to the different pressure on different parts of the belt, substantially as described.

I also claim the pointing and finishing mechanism S T, when operated substantially as described.

I also claim the conical guides and rolls *i* and *o*, for the purpose of keeping the belt in proper position at its edges, and for adjusting the same when necessary, substantially as described.

I also claim forming a chamber in which a cigar of ordinary shape may be rolled up into form, by means of a bag in an elastic belt and two arched rollers, as described—not meaning to lay any claim to the belt, or the bag formed therein, when used separately from the arched rollers.

No. 31,003.—JOHN NORTH, of Middletown, Ct.—*Improved Padlock.*—Patent dated December 18, 1860.—This invention consists in having the hook, or hasp, cast to the tumbler case, and securing the tumbler to the case by the cap having its outer edge bevelled and fastened by compressing the outer edge of the case to the rim of the cap, and neatly securing it without the aid of rivets.

Claim.—The combination, as constructed, the hook case, and the attaching the tongue, or catch, to the tumbler, as a new article of manufacture, as in the manner described.

No. 31,004.—DANIEL P. SHOPE, of Milesburg, Pa.—*Improved Washing Machine.*—Patent dated December 18, 1860.—The movable frame, that controls the pressure of the rubber upon the rollers, is governed by a foot brake W, and two spiral springs attached to the bottom of the box and piece marked G, one on each side; these springs throw the rubber up from the rollers, which is brought down again by the foot brake at pleasure.

Claim.—The arrangement of the perforated soap box C, with the rubbers I and K, elbow brakes or levers V U B and B *b*, and spiral springs, as shown and described, for the purpose set forth.

CLAIMS OF REISSUES GRANTED DURING THE
YEAR 1860.

No. 874.—*Improved Screw Wrench*.—I claim the use of two screws in working the movable jaw of a wrench, so that the said jaw will travel with the united velocities of said two screws, substantially as set forth.

AWRY G. COES.

No. 875.—*Improvement in Grain and Grass Harvesters*.—I claim, first, in combination with the hinged bar H and the finger bar, the intermediate shoe M, hinged to said bar H, substantially in the manner and for the purpose set forth.

I also claim, in combination with the hinged bar H, a lever that, when released, allows said bar to freely swing around its pivotted points, and when fastened, holds said bar firmly in its adjusted position, as described.

I also claim the shoe M, as a hinge and a support both to the cutter bar, substantially as described.

I also claim the socket or recess n, in the shoe M, for the reception of the finger bar, substantially as described.

I also claim, in combination with a finger bar, hinged at one of its ends to an intermediate piece, also hinged to the main frame, and elevating and supporting castor wheel for carrying that end of the machine, when adjusted for reaping or mowing, substantially as described.

I also claim the combination of a brace or support t, on the shoe, and a similar brace or support u, on the bar H, for resisting the strain on the finger bar when reaping, substantially as described, or for transporting it from place to place.

I also claim the flexible connection for elevating the outer end of the finger bar, substantially as described.

CYRENUS WHEELER, JR.

No. 876.—*Improvement in Grain and Grass Harvesters*.—I claim, in combination with the main frame of a grass harvesting machine, a finger bar, so hinged by one of its ends only to the grain side of the main frame that said finger bar, as it is advanced by means of its hinge, shall be free to rise above and fall below the plane on which the carrying or driving wheels are passing, substantially as described.

CYRENUS WHEELER, JR.

No. 877.—*Improvement in Grain and Grass Harvesters*.—I claim so hinging a finger bar by one of its ends only to the main frame as that it may oscillate or turn around its longitudinal axis, for the purpose of raising or lowering the points of the fingers, to adapt the machine to the condition of the ground or the crop to be cut, substantially as described.

And I also claim, in combination with a finger bar, hinged by one of its ends only to the main frame, so that the points of its fingers can be raised or depressed, a connecting rod or pitman, in two pieces, and so connected that one piece can turn independently of the other for the purpose of preventing the cramping or torsion of said rod, when the finger bar is turned, substantially as described.

CYRENUS WHEELER, JR.

No. 878.—*Improvement in Grain and Grass Harvesters*.—I claim a short finger bar, so hinged by one of its ends only to an arm, brace, or support, that is in turn hinged to the main frame in or near the line of the finger bar, as that said finger bar may rock or roll in the line of its length, as well as rise and fall in a line transverse thereto, by being simply drawn over the ground, substantially as described.

CYRENUS WHEELER, JR.

No. 879.—*Improvement in Grain and Grass Harvesters*.—I claim, in combination with a cut-

ter bar the shoe M, and its hinge, and a supporting piece and its hinged connection to the main frame, the arranging of the pivots of said hinges at right angles to each other, and in or near the line of the finger bar, as described.

CYRENUS WHEELER, JR.

No. 880.—*Improvement in Grain and Grass Harvesters.*—I claim the use of two hinges, substantially as described, whereby the finger beam may be folded to the main frame, in the manner essentially as set forth.

CYRENUS WHEELER, JR.

No. 881.—*Improvement in Grain and Grass Harvesters.*—I claim the combination of the dropping main frame, the loose tongue, and a hinged finger bar, substantially as and for the purpose described.

CYRENUS WHEELER, JR.

No. 882.—*Improvement in Grain and Grass Harvesters.*—I claim, first, in combination with the driving wheel, placed inside the gearing as above described, the angular tongue *i*, for preventing side draft, and, at the same time, allowing the horses to walk on the side of the standing grass or grain.

Second. I claim the above described use of the balance dogs *b b*, under the driver's feet, for throwing the cutting apparatus in and out of gear.

Third. I claim making the parting and gathering board *f* hinged and adjustable, as set forth.

Fourth. I claim regulating the size of the sheaves by means of the several ranges of gearing *p p*, within the driving wheel, in combination with the adjustable pinion *r*, as set forth.

JESSE URMY.

No. 883.—*Improvement in Grain and Grass Harvesters.*—I claim, in combination with a closed guard, the projections on the top and bottom of the cutter bar, for the purpose of clearing out the grass and other matter which tends to lodge in said guard, substantially as described.

JESSE URMY.

No. 884.—*Improvement in Bed Bottoms.*—I claim the spring bearers B and rocker links *c*, in combination with the bed frame, essentially as described.

And I also claim combining the spring bearers B B together and with the frame in lateral directions, by means of wire and clasps, in combination with connecting said bearers at their ends to such frame by means of rocker links, all substantially as hereinbefore specified, and for the purpose of forming a mattress foundation of bar springs, whose bars shall readily accommodate themselves to the varied strains induced by a person's body when lying upon them, and this without injurious strain upon one another.

TYLER HOWE.

No. 885.—*Improved Machine for finishing Hair Brush Handles.*—I claim, first, the employment, in combination with the brush clamp G or pattern H, or their equivalents of a wheel D, which is provided with V or gouge-shaped cutters *b*, or their equivalents, and which act upon the wood, substantially as and for the purpose herein shown and described.

Second. The combination with the pattern H of the brush clamp, of a supporting ledge or projection *a**, or its equivalent, as and for the purpose herein shown and described.

Third. The combination of the guide F, with the clamp G and cutter D, as and for the purpose herein shown and described.

Fourth. Centring the unfinished brushes in the clamp G, by means of the bristles *i*, in connection with the strip or plate J, and the inner curved edge H, or its extension H¹, substantially as described.

THOMAS MITCHELL.

No. 886.—*Improved Washing Machine.*—I claim the employment of the bars *a a*, provided with pins *n n*, when used in connection with a box or cylinder provided with buckets, substantially as and for the purpose herein specified.

I do not wish to confine myself to this or any other form of buckets, but claim the whole principle of dipping and pouring water in whatever form the buckets may be made, or in whatever way they may attach to the machine.

WILLIAM H. TAMBLING.

No. 887.—*Machine for Contracting the Circumference of Wrought Iron Bands.*—What we claim as the invention of William Massey is, first, the combination of two clamping jaws,

or their equivalent, arranged substantially so that a band or bar held by these jaws is caused to be contracted or upset in length by their movement towards each other, for the purpose set forth.

We also claim, in combination with the clamping jaws, a mould or matrix, or its equivalent, arranged between the jaws, substantially as described for the purpose set forth.

And we further claim, in combination with the clamping jaws, the adjustable rest E, or its equivalent, arranged substantially as described to support one side of the bar.

C. L. CROWELL,
ROBERT SMITH,
Assignees.

No. 888.—*Machine for Contracting the Circumference of Wrought Iron Bands.*—What we claim as the invention of William Massey is the method of upsetting or shortening by compression, bands or bars of metal by clamping the band or bar rigidly on either side of the point at which it is to be upset, and then moving the clamps towards each other, substantially as described.

We also claim the method of giving the required form and size and shape to a metal band or bar while being upset by clamping it on either side of the point at which it is to be upset, and forcing it by moving the clamps towards each other, in a mould or matrix, substantially as described.

C. L. CROWELL,
ROBERT SMITH,
Assignees.

No. 889.—*Improved Machine for Seaming Sheet Metal Roofs.*—I claim, first, a suit of seaming rollers mounted in a carriage and operating by the described continuous movement, to produce a standing seam of even height on stationary sheets of metal.

Second. Adapting a seaming carriage, substantially in the manner set forth, to produce a standing seam without other guide than the upturned edges upon which it operates.

Third. In the described combination with the seaming mechanism, the "pioneer" rollers *a a*¹, operating in the manner and for the purposes set forth.

Fourth. The described arrangement and application of a folding roller *c*, operating to turn or fold the edge of the metal from a right to an acute angle, preparatory to the action of seaming or closing rollers, as set forth.

Fifth. The burning, folding, and seaming rollers, constructed, arranged, and operating substantially as set forth, to complete a single or double standing seam at one operation.

Sixth. Arranging the seaming rollers against yielding bearings, substantially as and for the purpose set forth.

Seventh. Making the operative mechanism of a seaming carriage, adjustable in height, for the successive operations of a single and double seaming, as set forth.

Eighth. The operator's seat, applied to a seaming carriage, substantially as and for the purposes set forth.

Ninth. The stirrup *i*, constructed and applied substantially as and for the purposes set forth.

LUCIAN FAY.

No. 890.—*Apparatus for Exhibiting Stereoscopic Pictures.*—I claim a stereoscopic apparatus made to contain a number of stereoscopic pictures, said pictures being attached to an endless belt, band, cord, chain, or apron, in such a manner as to project therefrom and to form an angle therewith, the said endless belt being moved by a roller axle, or pulley, connected with an external handle, the rotation of which causes the successive presentation of the said pictures to the eyes, substantially as described; and I also claim the construction of the slides *D D*, substantially as set forth, when combined with a stereoscopic apparatus.

ALEX. BECKERS.

No. 891.—*Improvement in Slide Valves for Steam Engines.*—I claim the construction and arrangement of the partial rollers *E*, when sustained in their respective positions, substantially in the manner and for the purposes herein set forth.

I also claim providing a slide valve with lips *B*², and stops *B*⁴, substantially as herein shown and described, for the purpose of sustaining the pressure of the steam thereon upon the rolling supports *E*, or their equivalents, and of confining the rolling supports to prevent their becoming displaced.

I do not claim the employment of a cut-off valve *D*, sliding on the back of a valve having passages through which the steam is admitted to the ports in the cylinder, under the control of both valves, but I claim the within described arrangement of the supported back piece *B*, loose face piece *A*, cut-off means *D*, and the united passages *a b a b*, in the respective parts *A B*, whereby the parts *A B* are allowed to work to a limited extent, relatively to each other,

without affecting the action of the steam, nor allowing any escape of the same through the joint.

I likewise claim rigidly connecting the parts A and B, after they have been properly adjusted, by means of the set screws C C, or their equivalents, substantially as and for the purposes herein set forth.

R. C. BRISTOL.

No. 892.—*Improved Regulator for Timekeepers.*—*Claim.* The application to watches, and such time pieces as have their vibrations governed by a balance and hair spring, of a compound regulator composed of two or more segments, constructed and operating substantially as described.

And, also, the combination of said compound regulator, with one or more indicating devices, by which the movement of said regulator may be adjusted or defined, substantially as described.

R. S. MERSHON,
JOHN M. HARPER.

No. 893.—*Improved Mode of Attaching Life Preservers to Vests.*—I claim, first, an air tight bag or pad, that may be introduced or removed from between the face and lining of a vest or other similar garment at pleasure, without disturbing any of the seams of said garment, or impairing its utility as a garment to be worn without said bag or pad, substantially as described.

I also claim, in combination with an air bag or pad, to be applied to vests or other garments, the tube or channel C, when said tube or channel is formed by a continuation of the sides or walls of the bag or pad, and without a seam or other artificial connection or union therewith, substantially as described and for the purpose mentioned.

RICHARD L. NELSON.

No. 894.—*Improved Frame for Ladies' Dresses.*—I claim, first, the arrangement and construction of ladies' figures in parts, and the manner of fastening the separate parts together, substantially as described and for the purpose specified.

Second. I claim the arrangement and construction of the stand and feet for ladies' figures, made in parts in the manner described, and for the purpose substantially as set forth.

JOSEPH R. PALMENBERG.

No. 895.—*Improvement in Skates.*—I claim, first, attaching the runner B to the stock A, by means of the posts or knees $c^* c^*$, welded or firmly connected to the runner and passing through the stock, and having screw threads g formed on them, to receive nuts h , in connection with the sockets d , or any suitable shoulder or bearing surface, placed on the posts or knees, substantially as described.

Second. Having the stock A of the skate formed of two parts $a b$, connected by a spring c , when said stock is combined or used in connection with an elastic or spring runner B, for the purpose herein set forth.

N. C. SANFORD.

No. 896.—*Improvement in Reaping and Mowing Machines.*—We claim a tubular finger bar, when constructed in the peculiar manner, and for the purposes substantially as herein set forth.

JOHN T. WHITAKER.
CALVIN D. READ.

No. 897.—*Improvement in Reaping and Mowing Machines.*—We claim the peculiar arrangement and combination of the raker's seat or stand l , and wheel F, with the finger bar and frame A, whereby the weight of the raker is made to counterbalance the weight of the outer end of the latter, platform, and frame, substantially as set forth.

JOHN T. WHITAKER,
CALVIN D. READ.

No. 898.—*Improvement in Reaping and Mowing Machines.*—We claim mounting the driving wheel upon a tubular stud, secured to the side of a single frame beam, in the manner substantially as set forth, whereby the outer frame beam is dispensed with, and the reel still driven by the direct motion of the wheel, as described.

JOHN T. WHITAKER,
CALVIN D. READ.

No. 899.—*Improvement in Reaping and Mowing Machines.*—We claim loosening and tightening the reel belt by means of the pulleys *g* and *g*¹, screw *h*, and guide frame *j*, the whole being arranged upon the harvester frame, and operated in the manner substantially as set forth.

JOHN T. WHITAKER.
CALVIN D. READ.

No. 900.—*Improvement in Endless Chain Horse Powers.*—I claim, first, the combination of the straight links *c*, and odd links *i*, when constructed, arranged, and operating as described. Second. The combination and arrangement of the hubs or pinions *m m*¹, with the band and driving wheels, as described, for the purposes set forth.

GEORGE WESTINGHOUSE.

No. 901.—*Improvement in Making Nuts.*—What I claim is forcing a portion, or the whole of the metal displaced in forming the holes in the nuts, in the bodies of the nuts, by which I am enabled to make the nuts thicker and more compact than the bar from which they are cut, all substantially as hereinbefore set forth.

R. H. COLE.

No. 902.—*Improvement in Nut Machines.*—I claim the arrangement of the round punch *f*¹, within an aperture in the angular punch *d*, at the same time that a round punch *e* is arranged within an aperture in the bottom *j* of the nut box, when the said round punches are combined with the movement, which causes them to act jointly in perforating holes in the nuts formed in said nut box, substantially as described.

I also claim the joint arrangement of the angular punch *d*, and its interior round punch *f*¹, with the bottom *j* of the nut box, and the interior round punch *e*, when the said bottom of the nut box is combined with a spring, or its equivalent, in such a manner, in relation to the said angular punch *d* and the round punches *e* and *f*¹, that the action of the said parts, in forming a nut, will cause the completed nut to be thicker than the bar from which the blank was cut, substantially as herein set forth.

R. H. COLE.

No. 903.—*Improvement in Railroad Frogs.*—I claim combining the four rails, arranged in the manner before described, to form a frog, by attaching them separately to a series of separate chairs, in manner substantially as herein described, so that each part may be removed for repairs, and replaced independently of the other parts, as set forth.

I also claim holding down the movable end of the springing rail of the frog to its chair, so that it shall be free to expand and contract and spring laterally, by combining it with the chair by means of the lip extending under and embracing the chair, substantially as described.

JAMES M. DICK.

No. 904.—*Improvement in Mowing Machines.*—I claim attaching the cutter bar *B*, and cutter *A*, to the front of the frame of the machine, by means of a plate or bar, so arranged that its front end may be raised or lowered by a lever, independently of the main frame of the machine, and thus give to the cutting apparatus a tilting or rocking movement, which will elevate and lower the points of the fingers, said parts being constructed and applied to the patented machine of E. Ball, above referred to, in the manner substantially as described.

GEO. C. DOLPH.

No. 905.—*Improvement in Faucets.*—I claim, first, the application, to the key stem, of the collar *I*, cushion *Q*, and loose collar *R*, or their equivalents, in the manner and for the purposes described.

Second. The valve stem *L*, formed with three bearing surfaces *m m*¹ *m*², when connected by a floor *N*, and operated upon by a suitable cam *h*, in the manner and for the purpose explained.

Third. The elevated or projecting guide *G*, or its equivalent, when combined substantially as and for the purpose set forth, with a valve stem formed and adapted, to be actuated by a cam or other eccentric on the key stem, in both opening and closing the valve.

JAMES POWELL.

No. 906.—*Improvement in Pole Couplings for Railroad Cars.*—First. What I claim is making the mouth or face of the bunter, between the plates *a* and *b*, entirely open at the sides and in

front, so that the coupling of the pole may be easily made, whether it point directly forward or deviate to the right or to the left, substantially as herein set forth.

Second. I also claim sustaining the pole of a horse car in the proper position, by means of the brace G, substantially as herein described.

BLANEY E. SAMPSON.

No. 907.—*Improvement in Steam Engines.*—I claim adjusting the expansion of steam in steam engines, with the aid of an independent motion, to determine when a weight or spring shall commence to close a separate moving cut-off valve for each end of the cylinder.

FREDERICK E. SICKELS.

No. 908.—*Improvement in Steam Engines.*—I claim the combination of a cam, arm, or wiper, moved by an independent motion, with a reciprocating trip and catch to liberate a weight, spring, or other force that acts to close a cut-off valve.

FREDERICK E. SICKELS.

No. 909.—*Improvement in Steam Engines.*—I claim liberating the closing weight or apparatus to cut off, by the aid of an independent motion, in combination with a regulating reservoir, to resist the force and momentum of the rapidly moving parts in cutting off.

FREDERICK E. SICKELS.

No. 910.—*Improvement in Steam Engines.*—I claim imparting a coexisting movement to two reciprocating catch pieces in the operation of trip cut-off valves.

FREDERICK E. SICKELS.

No. 911.—*Improvement in Steam Engines.*—I claim an adjusting mechanism, so arranged that the relative position of its parts, during any portion of its movement by the engine, can be changed to alter the closing action of the weight that operates the cut-offs, without altering the time or encountering the resistance of opening the two separate moving cut-off valves.

FREDERICK E. SICKELS.

No. 912.—*Improvement in Steam Engines.*—I claim counterbalancing the weight of the lifting rods, so as to relieve the engineer in working the engine by hand, and so that when the engine is hooked on, they will exert their full force in descending to overcome any opposing friction.

FREDERICK E. SICKELS.

No. 913.—*Improvement in the Process of Forming Stitches by Machinery.*—I claim, first, in combination, an eye pointed needle carrying one thread, a hook properly shaped and moved, and a bobbin, supporting and giving off a lower thread, the combination, as a whole, being substantially such as specified and acting to make stitches under the mode of operation, substantially as hereinbefore described.

Second. The combination of a hook so shaped and moved as to spread a loop sufficiently to surround a bobbin, with a bobbin acting as specified, the combination being substantially such as recited hereinbefore, and acting so that a loop is seized, spread, and released with a bobbin thread enclosed in it, and then drawn up tight by the hook.

Third. I claim a revolving hook, so shaped as to operate substantially in the manner specified on loop of needle thread.

Fourth. I claim a hook so shaped and moved as to spread a loop substantially in the manner set forth, in combination with an eye-pointed needle actuated by an eccentric or equivalent motion.

Fifth. I claim feeding the material to be sewed step by step by an instrument, operating and constructed substantially as described, for the purposes specified, in conjunction with a presser foot or surface, governed by a yielding force, such as described.

Sixth. I claim a spring or yielding clamping surface when combined with another surface, so as to grasp cloth between them, and also with a feeding instrument, which is out of contact with the cloth when it is thus clamped, the operation being such that the cloth remains clamped, substantially in the manner and for the purposes specified, while the feeding instrument is out of contact or engagement with the cloth.

Seventh. I claim arranging a hook, that operates substantially in the manner specified, in such relative position to a table for supporting cloth, and to an eye-pointed needle, that the former shall extend loops of needle thread in planes perpendicular, or nearly so, to the plane of the cloth or material to be sewed, substantially as specified.

And, lastly, I claim a horizontal shaft, arranged beneath the platform or table of the machine, by which are actuated the needle, the hook, and the feeding instrument, in combi-

nation with a hook which moves in a vertical plane, or nearly so, the combination being substantially such as described.

ALLEN B. WILSON.

No. 914.—*Improvement in the Process of Forming Stitches by Machinery.*—I claim the mode or process, substantially as hereinbefore specified, of making a double thread stitch by means of machinery, its characteristics being as follows:

First. That there are certain periods in the formation of the seam, two loops of needle thread below the cloth at the same time, one being extended and the other being drawn up substantially in the manner and for the purpose specified.

Second. That the stitch is tightened or drawn up by the extension of the next succeeding loop as distinguished from a drawing up of the stitch by the motion of the needle or needle bar.

ALLEN B. WILSON.

No. 915.—*Improvement in Machines for Knitting Stockings, &c.*—What is claimed as the invention of Henry Burt is: The mechanism for "narrowing and widening," the same consisting of the movable stops $a^2 a^2$, combined with a rack of teeth or other suitable contrivance formed upon the shifting bar, and acting upon the carriage O of the yarn guide, as set forth.

Also, the stop rack k^1 , combined with the tube s of the yarn guide, and actuated in the manner and for the purpose as set forth.

Also, the mechanism which effects the changes of the clutches, the same consisting of the shifting bar, the arbor u^2 having a circular depression and radial recesses in its head, and levers and other parts connected to the same, and connecting the same with clutches, the whole being arranged and operating substantially as hereinbefore specified.

Also, the stationary roller y^1 and the projections $t^3 u^3$ and their intervening curve, formed upon the shifting bar, in combination with the spring s^3 , the sliding toggle bars; and also in combination with the rail t^1 and its depressions, the whole being for the object as described.

Also, the cloth bar c^1 , arranged and operating in the manner and for the purpose as set forth.

Also, the particular method by which the depressing bar c is carried and forced down upon the pointed ends or barbs of the needles in order to press them into the grooves in their shanks, viz: by a combination of bent levers $f^2 g^2 h^2$ and arms i^2 , the same being actuated substantially as described.

Also, the manner of raising the stitch hooks, viz: by an elevating plate y, through which they extend, and which is combined with and operates them, as set forth.

Also, the method of cleaning the point or lower end of the yarn guide from the depressing bar when the latter descends upon the needles, viz: by a ledge b on the said bar, in combination with the roller a applied to the T piece of the yarn guide, the whole being as specified.

Also, the method of cleaning the point of the yarn guide from the stitch hooks when the roller r passes by the thread guide, or as soon as the lateral motion of the thread guide is stopped, viz: by the bevelled edge plate k^2 , in combination with the screw, or other contrivance of similar character, projecting from the T piece of the yarn guide.

Also, the mode of adjusting or regulating the distance to which the points of the needles shall retreat, viz: by the movable curved pieces $o^2 p^2$ making part of the cam m^2 , the same being arranged and operating substantially as explained.

Also, the combination of the mechanism, being the arm q and shaft o, supported by pivots p p, which sustains and carries the roller r of the depressing and elevating bar v, raised and depressed by machinery, substantially as described.

DAVID A. HAYS,
President, &c.

No. 916.—*Improvement in Machines for Knitting Stockings, &c.*—What is claimed as the invention of Henry Burt is: the combination, with a knitting machine which is capable of producing a fabric of uniform width, of a pattern cylinder, or equivalent governing device, having upon it a prearranged pattern, in such manner that said device shall control automatically the formation of more or less stitches or loops as the work progresses, whereby variations in the width of the fabric may be effected in accordance with said prearranged pattern, as set forth herein.

DAVID A. HAYS,
President, &c.

No. 917.—*Improvement in Reaping Machines.*—I claim the combination of the finger beam, without a platform, the short open slot fingers, having small projections below the cutter, the scalloped cutter, and the guides for the cutter, these parts being constructed and combined substantially as described, the cutter vibrating in a straight line, each scallop having an edge

sliding in close proximity to an angular corner of the finger, and forming therewith a nipping angle, substantially as described.

OBED HUSSEY.

No. 918.—*Improved Water Wheel*.—I claim the wheel A and rotating breast or abutment E moving with different degrees of velocity, in combination with the apron or concave D; the whole being arranged to operate as and for the purpose specified.

P. H. ROOTS.

No. 919.—*Improvement in Coffins*.—We claim, first, the manufacturing of coffins of cast or raised metal when made substantially in the form and manner above described—that is to say, corresponding nearly with the human form and making the coffin in two parts or shells, united by a flanch, substantially as above set forth.

Second. The manufacture of coffins of raised or cast metal, in two shells each, formed with recesses of greater or less depth, which shall respectively constitute a portion of the receptacle of the corpse, thus approximating the coffin more nearly in shape to that of the human body than could otherwise be done.

J. G. FORBES.
R. SQUIRES.

No. 920.—*Improvement in Machines for Making Paper Bags*.—I claim the machine as a whole composed of mechanism for forming, feeding, cutting, pasting the tube or bag, combined, arranged, and operating substantially as described.

I also claim the use of a supporting bar, or its equivalent, around which paper may be formed into a tube, and in connection with which the said paper tube may be severed, each and the whole substantially as described.

I also claim giving the paper the variable feeding motion, for the purpose and in the manner substantially as described.

I also claim cutting the paper, without waste of material, in such a form as shall have suitable projections for the formation of the bottom lap or seam of the bag, and for the convenient opening of the bag at the mouth, substantially as described.

BENJAMIN F. RICE.

No. 921.—*Improved Valve for Steam Engines*.—I claim the oscillating valve constructed with an opening right through it and with two eccentric faces, and fitted to a double seat of correspondingly eccentric form which contains opposite ports or openings that are covered and closed by the faces of the said valve whenever the said valve is in contact with the said seat, substantially as herein described.

ADDISON CROSBY.

No. 922.—*Improvement in Railroad Chairs*.—I claim the construction of the chair, as herein shown and described, so that the passing weight will cause the jaws of the chair to gripe the rails, as and for the purpose herein shown and described.

D. W. CROCKER.

No. 923.—*Improvement in Fire Proof Safes*.—We claim, first, the employment of hydraulic cement, in whole or in part, as forming the insulating medium or admixture used between the outer and inner cases of safes and chests when said inner cases are formed of iron or metal, substantially as herein described for the purposes set forth.

Second. Joining the outer and inner metallic cases of safes and chests, by means of the door frame c and flanges b, or their equivalents, when said hydraulic cement, in whole or in part, is used as the insulating medium between said metallic cases, as herein described, and also by means of the anchors or bolts d extending from the outer and inner cases into the space between said cases, substantially as and for the purposes set forth.

EDWARD HALL.
JOSEPH L. HALL.

No. 924.—*Improved Burglar's Alarm*.—I claim the making of the knob of a drawer movable, and so combining it with an alarm apparatus as to cause an alarm to be sounded whenever an attempt to open the drawer by pulling on the knob is attempted.

I also claim the combination of the latch or spring bolt, and the secondary bolt, and key or lever, with the movable knob and the drawer, the same being to operate together as specified.

I also claim the combining of the alarm pawl m with the knob rod by means of a movable hanging lever u, to be operated or moved by a stud, or its equivalent, fixed in the knob rod.

I also claim the combination of a decoy key, or an auxiliary alarm springing mechanism,

with an alarm giving apparatus, its springing device and a latching or bolting apparatus applied to a drawer, or its equivalent, the said decoy key or auxiliary alarm springing mechanism, when put in motion, operating to set in movement the said alarm giving apparatus, so as to cause it to sound an alarm as it would be caused to do by reason of any movement of its main springing device.

I also claim connecting the decoy key with the hanging lever, so as to operate as specified; also connecting the said hanging lever to the secondary lever, so that a forward pull on the secondary lever shall move the hanging lever, so as to effect the sounding of the alarm.

I also claim the combination of the counter, or numbered wheel, and its operative mechanism with the knob rod, the same being to exhibit the number of the attempts at opening the drawer, meaning also to claim the so combining the operative mechanism of the counter wheel with the hanging lever that a movement of the latter will effect a movement of the said wheel.

EPHRAIM BROWN.

No. 925.—*Improvement in the Mode of Staying Piles for Wharves, Piers, &c.*—I claim, first, the linked frame S S, constructed and operating as described, for the purpose specified.

Second. In combination with piles, as described, the sleeves *a* and braces *b*, constructed and operating substantially as specified.

E. H. ANGAMAR.

No. 926.—*Improvement in Knitting Machines.*—Claim. First. The use of a hollow circular needle plate, substantially as hereinbefore described, and having grooves in the outer or upper surface, for the purpose hereinbefore set forth.

Second. The loop regulator I, or equivalent thereof, for the purposes and object substantially as hereinbefore described.

Third. The loop regulator, or equivalent thereof, in combination with the needle *a*, and hollow circular needle plate A, having grooves in the outer or upper surface, as hereinbefore described, the said several parts operating in the manner and for the purposes as before set forth.

JONAS B. AIKEN.

No. 927.—*Improvement in the Ventilation of Hats.*—I claim a ventilating piece, having a smooth surface next the head, and grooves or openings next the brim, and made of India rubber, gutta percha, or prepared paper, and firm enough not to crush or close up said openings, and impervious to perspiration, as herein represented, and for the purpose set forth.

JNO. McMANNUS.

No. 928.—*Improved Chain Machine.*—I claim, first, the combination of a punch, plunger, or other equivalent instrument, with a forming guide, or its equivalent, substantially as described.

Second. I also claim the combination of a forming guide, or its equivalent, with the instruments coöperating with said guide, or their equivalents, to effect the bending of the arms, substantially as described.

Third. I also claim the combination of a die *j*, Fig. 6, or its equivalent, for giving the first bend to the link, with a forming guide, or its equivalent, substantially as described.

Fourth. I also claim the combination of a carrier, on which the link is transported, with a forming guide in which the link is deposited, or their equivalents, substantially as described.

Fifth. I also claim the forming guide for holding and transmitting the chain during the formation thereof, or its equivalent, substantially as described.

Sixth. I also claim giving to the forming guide an angular or intermittent rotary movement upon its axis, so as to present the chain to the successive links in such positions that the arms thereof will alternately interlock.

Seventh. I also claim the slender converging rods *r r*, or their equivalent instruments, for holding down the top link while the arms of the link next beneath are being bent over it, substantially as described.

Eighth. I also claim the arrangement and operation of the slides *a a*, or their equivalent, substantially as described, so as to bend the arms of each link successively by pairs and cause the succeeding pair or pairs to overlap the preceding ones, or in case the links have an odd number of arms, to cause the succeeding arms of each link to overlap the preceding ones, singly in succession.

LAWRISTON TOWNE.

No. 929.—*Improved Spring Bed Bottom.*—I claim, first, the method herein described of connecting the spring *b*, or any equivalent means, to the strip *a*, by which the same is secured in place by contact between compressing surfaces, substantially in the manner and for the purposes set forth.

Second. I also claim the use and application of the strip *a*, substantially in the manner and for the purpose specified.

PHILIP ULMER.

No. 930.—*Improvement in Flouring Mills*.—I claim, first, the arrangement of tubes B and C, connected by the supplemental shoe K, with the air tight chamber A, in the manner described, and for the purposes specified.

Second. I do not claim the suction blast or draft as new; but what I do claim is, cleaning grain through a tube or case at the point K, by means of tube or case C and K, and blast fan D, or their equivalent, as set forth.

D. S. WAGENER.

No. 931.—*Improvement in Furnaces for Evaporating Sugar Juices*.—I claim, first, the hemispherical kettle, with alternate converging flutes, as and for the purpose described.

Second. In combination with the said kettle, fluting the surrounding brick work, as described, so as to form an undulating flue around the kettle.

Third. Passing the connecting pipes of the kettles through the flues, whereby they are utilized as evaporators, as set forth.

Fourth. The inclined gutter, in combination with the gutters of the respective kettles, as described.

Fifth. The cylindrical flue enclosing the kettle, connected with the exit flue, and communicating with the undulating flue at top by graduated draft channels, substantially as set forth.

L. LEFEBVRE.

No. 932.—*Improvement in Gas Regulators*.—I claim arranging the graduated lever 4 with the adjustable weight 17, in combination with the gasometer 22, and the valve 10, in such a manner that, by raising the gasometer, the valve is closed and the supply of gas stopped, so that the pressure of the gas in the gasometer can be regulated by adjusting the weight 17.

And, in combination with the lever, gasometer, and reservoir, I claim admitting the gas direct against the gasometer by means of a small tube 8, which is contracted toward its upper end so that impurities carried up by the gas, or any deposit, will fall outside of the said tube without being able to interfere with the working part of the gas regulator.

I also claim arranging the stud 21, in combination with the lever 4, rod 9, and valve 10, in such a manner that, by depressing the stud 21, the supply of gas may be ascertained without raising the cover of the gas regulator.

WILLIAM MALLERD.

No. 933.—*Improvement in Machines for Pressing Bonnets, Bonnet Frames, &c.*—I claim, as the invention of William Osborn, deceased, first, pressing the whole of a bonnet, frame, or similar article, at one operation by dies, substantially as specified, whether formed of one or of several pieces, and irrespective of the particular size or shape.

I also claim forming the side crown and flaring face piece of a bonnet frame in one piece, or at one operation, as specified.

MARY J. OSBORN,
Executrix.

No. 934.—*Improved Air Heating Furnace*.—I claim the improved furnace, constructed with its dome F, closed at top, and made to open into the radiator only through a series of columns, extending upward into the same, with a radiator having its bottom plate to cover the entire dome F, in manner substantially as described.

I also claim the improvement in the construction of the radiator arranged over the dome of the fire pot, the same consisting in making its bottom a concavo-convex plate, or arch, and with the concave side disposed downwards, and directly over said dome, whereby the ascending heat from the top of the dome is retained in the concavity of said bottom, and not only made to warm, to great advantage, the air that rushes into the same, but to heat the radiator, so as to improve the draft through the fire pot and supporting columns of the radiator.

WALTER BRYENT.

No. 935.—*Improvement in Harvesters*.—I claim, first, in an automatic raking device, the combination of the bar *f*, standing at an angle with the wing C, the bar S, and the rake A, arranged in relation to the taper space R, in the manner and for the purpose substantially as above specified.

Second. The combination of the bar S and the rake A so arranged and operating that the rake which at first moves longitudinally with the straw shall afterwards change its relation thereto and compress it laterally against the bar S, so as to hold it firmly in place until it is deposited at the opening R in a compact gavel lying nearly parallel with the direction in which the machine moves, substantially as above set forth.

Third. The combination of the elastic metal cap or sheath *c* connecting the divider *b* with the main wing *C*, with the reversed hook or bent projecting end *d*, for an automatic rake, when said parts are so constructed and arranged for joint operation, essentially in the manner and for the purposes set forth.

PELLS MANNY.

No. 936.—*Improvement in the Production of Illuminating Gas.*—I claim the production of an illuminating gas by passing the vapor of water and a hydro-carbon, or its equivalent, mixed previously to decomposition, into a retort containing carbon at a high red heat, substantially in the manner above set forth.

J. MILTON SANDERS.

No. 937.—*Improved Low Water Alarm for Steam Boilers.*—I claim, first, so combining a steam valve and chamber with a ball or float as that the pressure of the steam in the boiler, in conjunction with the weight of the ball or float, will, when the water falls so low in the boiler that the upward force of the float does not sustain said valve, open said valve and make a free escape of the steam, substantially as described.

Second. I claim, in combination with a valve that is opened by the pressure of the steam and the aid of the ball or float, another valve *e*¹ of lesser area, that closes one end of the steam cylinder, so long as the water in the boiler remains at the proper height therein and the pressure of the steam does not exceed a certain amount, substantially as described.

Third. I claim, in combination with a valve, opened by the pressure of the steam, and by the aid of the ball or float, and which are not resisted by a weight or weighted lever, a steam whistle, bell, or other means of giving an alarm, by the escape of the steam, substantially as described.

Fourth. I claim the combination of the float and the differential valves with the steam chamber for the purpose of opening said valves by immersing the float deeper in the water to sound an alarm when there existed an excessive pressure of steam in the boiler, substantially as described.

SELAH DUSTIN.

No. 938.—*Improvement in Straw Cutters.*—I claim, first, arranging the flange or flanges on one cylinder so that they will meet the knife or knives on the other cylinder as the two cylinders rotate, substantially in the manner described, and this I claim whether the flange is or is not made of, or armed on its face with, soft material.

Second. I also claim, in combination with the flanged cylinders, the throat placed in such relative position to said cylinders as to nearly meet the latter at a desired point in their revolution, thus assisting to give a long cut if said throat be expanded, and a shorter cut when the throat is contracted, substantially as described.

WARREN GALE

No. 939.—*Improvement in Manure Excavators.*—I claim, first, the employment of the hinged pitch fork or rake, having an oblong slot *e* and a stop notch *g* in its handle *E*, in combination with the curved hinged locking bar *F* and a draft bar *B a*, substantially as and for the purposes set forth.

Second. The combination of the devices mentioned above with a sled or carriage *A*, substantially as and for the purposes set forth.

ABRAHAM R. HURST.

No. 940.—*Improvement in Machines for Enamelling Mouldings.*—I claim the combination of the mechanism, or the equivalent thereof, for propelling the moulding with the plate, the lower edge of which is formed the reverse of the moulding to strike off the surplus enamelling, and to rub it down, and with the bed or gauge which sustains the moulding in its proper relations to the said plate, substantially as and for the purpose specified.

I also claim, in combination with the combination above claimed, the employment of the side plates at the sides of the moulding, substantially as and for the purpose specified.

And I also claim, in combination with the parts enumerated as claimed in combination in the second of the above claims, the employment of the other of the plates specified as having its lower edge of the reverse form of the moulding, substantially as and for the purpose specified.

And, finally, I claim making each of the said end plates, and each of the said side plates, or all of them, self-adapting by yielding pressure, substantially as described, when combined with the mechanism, or its equivalent, for feeding the moulding and with the bed or gauge, substantially as and for the purpose specified.

ROBERT MARCHER.

No. 941.—*Improvement in Machines for Folding Paper.*—I claim, first, a slotted plate *B*, table or contrivance for receiving and supporting the sheet.

Second. Two parallel planes or plates (L M) extending at right angles from such support, and so arranged that there shall be one of the said plates on each side of the slot *b* of the first element or support of the sheet.

Third. A striking and folding frame or plate D so arranged and operated as to press the paper against the middle or other part of it, force it downward through the slot and between the two parallel plates, the said parallel plates operating to complete the fold and hold the sheet of paper during the return or retrograde movement of the striking frame or plate.

And in combination therewith I claim a second striking and folding plate N, arranged at right angles to the said two parallel plates, and made so as to press or operate through them or their slots, and directly after the said retrograde movement of the first one as to press against the sheet of paper and force it through one of the said slots and thereby once more or a second time fold it.

And I claim in combination with such second combination of mechanism a third striking and folding plate R, and slotted parallel folding plate S, and friction rollers *p q*, or equivalent contrivances, the same being for supporting the twice folded sheet of paper, folding it a third time, and subsequently discharging it, such discharge taking place in consequence of the return or retrograde movement of the striking or doubling plate, as above described.

I also claim the combination of one or more register points or a registering apparatus with the sheet receiving table or platform, and an apparatus for producing one or more folds in the sheet.

I also claim a combination composed not only of machinery for folding sheets of paper, but machinery for receiving and piling or packing such sheets in a regular pile or pack.

And I also claim the combination of mechanism which is applied to the striking plate and its rollers or folding contrivances and used for packing the sheets; the said mechanism consisting of the stationary plate T and the spring plate U, or plate and its springs or other proper equivalents, which permit the recession of the plate in proportion as the pack of sheets increases in size; the whole being arranged and made to operate substantially in the manner as hereinbefore specified.

I also claim the combination of one or more edged gauges C C¹ C², with the sheet-receiving platform, and an apparatus for folding paper, substantially as described.

GEORGE K. SNOW.

No. 942.—*Improvement in Dispensing Switches on Railroads.*—I claim the employment, in connection with the sidings or turnouts on railways, of supplementary inclined and elevated rails in combination with car wheels so constructed as regards the said inclined rails, which are so arranged, as regards the rails of the siding or turnout, that the wheels may be elevated above and free from the control of the rails of one track and be placed under the control of those of another track, as herein set forth.

WILLIAM WHARTON, JR.

No. 943.—*Mode of Constructing Matrices, &c.*—I claim, first, to render the copper of alloy and tin (when even mixed with other metals or ingredients) pliable, soft, and in such a state as to admit of an easy and perfect impression of any proper design, figure, mould, or object of or on metal; this figure, design, or mould, may be engraved or be produced by the art of electrotyping, as a copy of any design or figure, thus yielding and producing a perfect mould, matrix, or die.

Second. I claim the discovery that the alloy of copper and tin possesses the property to be pliable, soft almost like wax, when under a red heat, and enabling us to press it into any proper mould, and that this alloy will receive a perfect and sharp impression of such mould, article, or design, while under a red heat, without applying a great power in pressing.

Third. I claim, in connection, to manufacture printing type out of the alloy of copper and tin, (when even mixed with other metals or ingredients,) by rendering the alloy so pliable and soft by fire that it may be forced into any type-mould by applying pressure, receiving a perfect impression of such mould and in the mould already described.

JOHN JOSEPH CHARLES SMITH.

No. 944.—*Improvement in Coal Stoves.*—What we claim as the invention of Henry Stanley is, first, the combination of the grate *i* with the chamber E, substantially as and for the purposes set forth.

We also claim the upper section and flues, with the chamber E, or its equivalent, as and for the purposes specified.

We also claim the combination of the shell or projection *x*, and the opening *s*, to diffuse and heat the air before it enters the combustion chamber.

CHARLES EDDY.
JACOB SHAVOR.

No. 945.—*Improved Machine for Planing Lumber "out of wind."*—We claim, first, the peculiar construction of cutter head herein described; the cutter head itself being made use of to

turn and break the shaving, in the manner of a double iron plane, and being furthermore made concave for the purpose of facilitating this operation.

Second. The clamp as herein described for the purpose of dogging the lumber to the bed of the machine, the body of the clamp being pivotted at *d*, and forced up by the screw *F*, or its equivalent, the dog *h* being adjustable therein, in the manner and for the purpose set forth.

Third. The within described method of securing the dog *M* to the bed of the machine by means of the teeth or cogs *l*, and the mortises in the side pieces *m*, for the purpose set forth.

Fourth. I claim the bar *D*, or its equivalent, in combination with a rotary cutter head and travelling bed *I*, provided with suitable dogs, for planing straight, and out of wind, substantially as set forth.

SOLOMON S. GRAY.

S. A. WOODS.

No. 946.—*Improved Automatic Boiler Feeder*.—I claim, first, the oscillation of the chambers *L L*¹, by the gravity of the water, for the purpose of alternately filling the chambers and emptying their contents into the boiler as set forth, when the said chambers are combined with the arrangement of means for filling and emptying them, as described.

Second. The combination of the chambers *L L*¹, oscillated as described, with the cylinder *C* and shell *K* constructed as set forth, for the purpose of producing a communication between one of the chambers and the interior of the boiler, at the same time that a communication is produced between the other chamber and the tank *F*, to allow one chamber to be filled with water from the tank, while the contents of the other chamber is being emptied into the boiler.

Third. The combination, with the chambers *L L*¹, oscillated as described, of the pipe *D*, to govern the movement of the chambers as set forth.

SIMON B. HUNT,

Assignee of *H. B. Adams*.

No. 947.—*Improvement in Looms for Weaving Figured Fabrics*.—I claim combining with the jacks that operate the series of leaves of heddles, and with the lifter and depresser, and pattern chain, or any equivalent apparatus for determining the pattern, a mechanism for holding the jacks either in their elevated or depressed position, when not required to be operated, substantially as and for the purpose specified.

I also claim imparting an irregular motion, substantially such as herein described, to the jacks, by means of eccentric cog wheels, substantially as and for the purpose specified.

MOSES MARSHALL.

No. 948.—*Improvement in Knitting Machines*.—I claim the improvement of driving the rough roller *A* of the herein specified take-up mechanism of a rotary knitting machine, by means of the friction apparatus herein set forth, or their mechanical equivalents, substantially in the manner and for the purposes herein described, instead of giving a positive rotary motion to this roller as heretofore; so that this draft roller with its incumbent take-up roller *B*, by the combination of a friction driver, without any additional mechanism or any adjustment, continually gives the same tension to the web in knitting, however much the yarn varies in size, or whether much or little yarn is fed to the needles, or whatever quantity of web is on the take-up roller.

CLARK TOMPKINS.

No. 949.—*Improvement in Apparatus for Making Glass Stoppers for Bottles, &c.*—I claim forming the projections on the cap of the vessel by means of the radial punches or their equivalents, and the vertical recesses on the plunger or die, which recesses allow the said plunger to be withdrawn after the formation of the projection as set forth.

THOMAS R. HARTELL.

No. 950.—*Improvement in Casting Boxes for Wheel Hubs*.—What we claim as the invention of Thomas Ellis is, supporting the sand core *E* between two sand heads *F*, or their equivalents, when used in combination with a chamber *D* of uniform taper, in the manner and for the purpose substantially as herein set forth.

THOMAS ELLIS.

WILLIAM A. ELLIS.

A. D. ELLIS.

No. 951.—*Improvement in Grain and Grass Harvesters*.—What is claimed as the invention of Collins B. Brown is, first, the bent main beam so constructed as to serve as an axle for the driving wheel, a finger beam and a support for the rear end of the tongue, and the greater portion of the gearing, whereby the machine is rendered compact, strong, and simple, substantially as described.

Second. Constructing the main beam of a reaper and mower with a variable bend, for the purposes substantially as described.

Third. The combination of the pallets J j, geared together, and the arm G, or its equivalent, with the tappet wheel C, or its equivalent, for imparting to the cutter a vibrating motion, substantially as described.

CORNELIUS AULTMAN.
LEWIS MILLER.
T. R. TONNER.
JACOB MILLER.
GEORGE COOK.

No. 952.—*Improvement in Grain and Grass Harvesters.*—What is claimed as the invention of Collins B. Brown is, first, the combination of a skeleton track clearer with the cutting apparatus of a mowing machine, substantially as described.

Second. The construction of skeleton track clearers of a series of fingers, substantially as described.

Third. A yielding finger, or the equivalent thereof, in track clearers, substantially as described.

CORNELIUS AULTMAN.
LEWIS MILLER.
T. R. TONNER.
JACOB MILLER.
GEORGE COOK.

No. 953.—*Improved Machine for Cutting Loaf Sugar.*—We claim, first, the application and use of two or more rollers, having brushes around their circumferences, and acting upon both sides of slabs of sugar, for the purpose of cleaning off the dust adhering to the same, by the process of sawing, thereby reproducing the appearance of the crystals, as described.

Secondly. We claim in a machine for cutting loaf sugar the combination of two circular surfaces, with knives or cutters on each, and the knives or cutters opposite each other substantially corresponding in form, and so combined that in operation the knives or cutters will act simultaneously on each side of the slab of sugar, in the manner and for the purpose substantially as described.

ADOLPH BROWN.
FELIX BROWN.

No. 954.—*Improvement in Grinding the Inner Surfaces of Cast Iron Kettles.*—I claim forcing around the interior surface loose pieces of grinding material by means of revolving wings or other sufficient apparatus which shall cause said loose pieces to revolve around while they are left free to act upon the surface with which they are brought into contact, substantially in the manner and for the purpose set forth.

C. C. BRADLEY, JR.

No. 955.—*Improved Mode of Hanging Bells.*—What I claim is, securing the bell firmly in the yoke and suspending the bell upon the shoulder of the bolt c, passing up through a round hole cast or made in the top of the bell and shank, by the nut and thread upon the end of such bolt, in combination with the round tapering shank of the bell, and corresponding tapering hole in the yoke.

G. W. HILDRETH.

No. 956. *Improvement in Cooking Ranges.*—I claim, first, the combination of the flanges or projections attached to the side plates of the boiler chambers, with the grate constructed so as to admit air to the fuel from below, and hung so as to allow of its free play, and made narrower than the fire chamber as described, whereby the contraction and expansion of the grate is prevented from injuriously affecting the remaining portions of the range or stove.

Second. In combination with the back plate constructed as described, I claim providing the boiler chamber with flanges or projections of such shape and width as to lap over the lateral end of said back plate, whereby the plate is allowed to expand and contract without deteriorating the parts adjacent thereto, and without leaving open spaces for the escape at the sides of the products of combustion, substantially as herein set forth.

Third. The use of the sliding covers q q, in combination with the top plate, arranged to operate substantially as described.

H. H. STIMPSON.

No. 957.—*Improvement in Cellular Iron Pavement.*—We claim combining together a series of hexagonally formed ribs and cells, so as to constitute a block of pavement of the form shown upon the drawing.

We also claim constructing each cell perfect in itself, and by such construction making the cells of the upper periphery of the block not only uniform, but answering as ledges to sup-

port the same upon the adjoining block, and thereby distribute the superincumbent weight equally along the whole side of the block, substantially in the firm manner herein described.

S. H. TITUS.
O. DES GRANGES.

No. 958.—*Improvement in Coal Stoves.*—What we claim as the invention of Henry Stanley is the manner in which he arranged and combined, as a whole, the two sections or stories thereof, consisting of two cylinders, each with four triangular radiating flues arranged around and in contact with the same, one at each corner of the said plinth or base, which flues communicate with the flue space in the plinth or base, with the intermediate chamber E and with the cornice space G, as herein described and set forth.

We also claim the combination of the grate *i* with the intermediate chamber E, substantially as and for the purposes herein set forth.

We also claim the combination of the upper section or story, and the flues arranged and connected therewith, with the intermediate chamber E, or its equivalent, as and for the purpose herein specified.

We also claim the combination of the said shell or projection *x* with the said opening *s* to diffuse and heat the air preparatory to its entrance under and into the fire to aid, facilitate, and promote the combustion of the fuel, and to increase the volume or quantity of heat by means thereof, as herein described.

We also claim the combination of the chamber H, having therein the damper *o*, and thereto attached the exit pipe F, with the intermediate chamber E and the cornice G, as herein described and set forth.

CHARLES EDDY.
JACOB SHAVOR.

No. 959.—*Improvement in Bonnet Frames.*—What I claim in the manufacture of ladies' bonnet frames, is making the tip of bonnet frames of two separate thicknesses of the fabric known as cape net by subjecting the same while in a moist state to heat and pressure in metallic moulds of the required form to impart the required shape and effect the union of the two thicknesses at one and the same operation, substantially as described.

I also claim making the crown of bonnet frames of two separate thicknesses of the fabric known as cape net by subjecting the same while in a moist state to heat and pressure in the metallic moulds of the required form to impart the required shape and effect the union of the two thicknesses at one and the same operation, substantially as described.

And I also claim making the entire bonnet frame of two separate thicknesses of the fabric known as cape net by subjecting the same while in a moist state to heat and pressure in metallic moulds of the required form to impart the required shape and effect the union of the two thicknesses at one and the same operation, substantially as described.

WHITTEN E. KIDD.

No. 960.—*Improved Composition for Preventing the Incrustation of Steam Boilers.*—We claim the application of a compound of alum, glue, wood ashes, and wheat bran, prepared and applied, as above specified, to prevent incrustations on the interior of steam boilers and pipes of whatever kind pertaining thereto, as herein specified and substantially set forth.

H. FREDERICK KNODERER.
LEVI F. KNODERER.

No. 961.—*Improvement in Water Proof Leather Goods.*—I claim the article of manufacture herein named, prepared for the undressed skin, exposed to heat, coated with the charged rubber solution or compound, and then subjected to the vulcanizing process, as herein set forth.

SAMUEL LAFORGE.

No. 962.—*Improvement in Corn Huskers.*—I claim the combination of husking rollers and pressure flap, operating substantially as and for the purpose set forth.

DAVID M. MEFFORD.

No. 963.—*Improvement in Knitting Machines.*—We claim the apparatus for revolving the take-up machinery in unison with the needle cylinder, as herein specified, substantially in the manner and for the purpose set forth.

We also claim revolving the shaping plates S and C by a positive motion with and at the same velocity as the take-up motion, substantially as described and for the purpose specified.

CLARK TOMPKINS.
JOHN JOHNSON.

No. 964.—*Improvement in Burglar's Alarms.*—I claim, first, the employment, in connection with the within described gun, or alarm, an adjustable gimlet screw D, which is secured in the dovetailed groove in the body while in use, and which is secured in the barrel or bore by a screw when not in use, substantially as herein specified.

Second. The employment of the two slides A¹ A¹, between which the hammer falls, which serve to prevent particles of the cap from flying off, and at the same time forming a snug protection for the hammer and causing a louder report of the cap, as herein fully described.

Third. Securing the rear of the spring F to the body of the gun by means of the nipple, which passes through said spring and screws into the body, substantially as and for the purpose specified.

J. A. REQUA,

President of the Wilson Manufacturing Company.

No. 965.—*Improvement in Curtain Fixtures.*—I claim operating the lever c, which arrests the curtain roll, by means of the cord which raises the curtain, whereby the curtain is held stationary when the cord hangs vertically and is set free to be raised or lowered when the cord is drawn at an angle, as set forth.

LEWIS WHITE.

No. 966.—*Improvement in Harvesters.*—I claim, first, the combination of the crank, operated by the main shaft, with the rake and sweep post to which it is attached, and the eighth arm, when arranged in the manner described.

Second. The wire gauze divider, or its equivalent, when arranged on the rake head, as set forth, to divide the falling grain from that which is being removed by the rake, as described, and for the purpose specified.

Third. The pivotted sweep post, with its eighth arm, in combination with the crank H, and the mechanism connecting them, giving the reciprocating motion to the rake; the whole being constructed, arranged, and operated substantially as described.

Fourth. The arrangement, substantially as described, of the connecting rods O and N, the sleeve L, and slide M, in advance of and in relation to the main shaft and rake shank, as and for the purpose specified.

Fifth. The spring catch marked C and dog marked a, in combination, and the location of said catch to break the forward motion of the rake and aid its return by the spring, substantially as described.

Sixth. The projection on the lower side of the slot or notch in the dog to arrest the catch with certainty, in the manner described.

Seventh. The application and arrangement of the toothed rack, connected with the spring, by which the rake is caught and held after its descent upon the cut grain on the platform, and whereby its rebound is prevented, and the gavel is removed with greater certainty and regularity.

Eighth. The placing of a rake, having spring teeth, in the rear of the machine, for the purpose of gleaning and contracting the gavels into sheaf form, substantially as described.

Ninth. The combination of the cam attached to the main shaft, with the arm of the rear rake, to cause it to pass over the gavels at the proper time, as described.

Tenth. The ratchet cam I, and lever, in combination, substantially as described, for throwing both rakes into or out of action, as set forth.

CORNELIUS R. BRINCKERHOFF.

No. 967.—*Improvement in Sugar Mould Carriages.*—I claim, first, the construction and arrangement of carriages for the holding and conveying of sugar moulds, the same consisting essentially in the combination of a platform provided with a suitable train of wheels of small diameter, for vertically supporting the moulds, with a series of semicircular braces, or their equivalents, and guard chains or bars, for laterally holding said moulds, substantially as set forth.

Second. In sugar mould carriages, constructed as described, with a brace plate arranged at a higher level relatively to the platform, I claim the two wheels running on or with one or two axles fixed to the platform, in combination with a swivel wheel, the shank or standard of which is made to bear against the said brace plate, whereby the carriage may be moved about with greater facility than this has ever been done heretofore.

Third. The combination and arrangement of stationary pins and India rubber washers, or their equivalents, in the platform, so that the moulds, when in position upon and supported by the platform, shall have their drip holes closed by their own weight, substantially in the manner and for the purposes herein specified.

Fourth. The general construction, combination, and arrangement of sugar mould carriages, as herein shown and described, so as to operate substantially in the manner and for the purposes set forth.

C. E. BERTRAND.

No. 968.—*Apparatus for Heating or Cooking by Gas.*—I claim the combination of an air and gas burner, and an air guide or concentrator G, operating in the manner substantially as set forth, for the purpose specified.

Second. I claim the flue space X, around the chamber H², with its openings Y and Z, operating as an air heater when the oven is in place, and as a passage for the escape of the gases when other utensils are employed, as set forth.

W. F. SHAW.

No. 969.—*Improvement in Coating Hose Pipe.*—What is here claimed is: constructing hose or flexible tubing of textile and fibrous material, with an internal water-proof coating, by first applying said coating on the outside of the cloth, or other pipe, and then inverting the coated pipe by drawing it over and through a metallic cylinder, or otherwise, suitably inverting the same.

BENJAMIN F. LEE,
Treasurer of New York Rubber Company.

No. 970.—*Improvement in Grain and Grass Harvesters.*—I claim, first, the combination of the main frame A, (carrying the cutting apparatus,) and the finger bar C, with the vibratable coupling arm Q, the whole constructed and operating substantially as hereinbefore described, and for the purpose set forth.

Second. In combination with the main frame A, vibratable coupling arm Q, finger bar C, shoe or shield C¹, upright post P, arm I, hinge pins *u* and *v*, the guiding slot *o*, and set screw *d*, or their equivalent, the whole arranged and operating as hereinbefore specified, for each or all of the purposes set forth.

Third. The combination of the main frame A, finger bar C, and cutter bar *y*, when the finger bar is connected to the main frame by the vibratable coupling arm Q, and the whole is arranged so that the relation between the finger and cutter bars is not materially changed in raising and lowering the cutting apparatus, substantially as hereinbefore described.

Fourth. I claim the combination of the main frame A, shoe or shield C¹, and the vibratable coupling arm Q, or its equivalent, when the whole are constructed and operate substantially as specified, for the purpose set forth.

Fifth. I claim the combination of the short finger bar C, and the shoe or shield C¹, (connected to the main frame by a hinged coupling arm,) with the main frame A, when the several parts are constructed, arranged, and operate in the manner and for the purposes specified.

Sixth. I claim the combination of the short finger bar C, the shoe C¹, divider *g*², and main frame A, when the said finger bar, shoe, and divider, are each constructed in the peculiar manner specified, and the whole arranged together and with the main frame, as and for the purposes herein described.

JACOB SWARTZ.

No. 971.—*Improvement in Grain and Grass Harvesters.*—I claim, first, so combining a hinged finger bar, and main frame, with levers, substantially as described, extending towards the driver's or conductor's seat, as that the occupant of said seat can, without leaving his position, raise up either end of the finger bar independently of its other end, or raise up both ends thereof at pleasure, substantially as described.

Second. I claim the platform bar Q, as a means of securing the platform to the finger beam, and for strengthening said finger beam when it has the platform to carry, substantially as described.

Third. I claim the inclined castor wheel S, arranged as represented, and in combination with the platform, whereby the latter is elevated when the machine is being turned short around to the right, substantially as described.

Fourth. I claim, in combination with a finger beam and platform, placed in rear of the main supporting wheel, the two castors N S, arranged as described, for allowing the machine to turn short around to the right, for the purposes specified.

Fifth. I claim a revolving track clearer, when operated from a ground wheel through gearing, substantially as described.

CYRENUS WHEELER, JR.

No. 972.—*Improvement in Reaping and Mowing Machines.*—What is claimed as the invention of Leander J., William S., and Cyrus H. McCormick, is, making the finger beam of a mowing machine of a bar of iron, wedge-formed in its cross section with its forward edge, which carries the fingers made thin that the sickle may act upon and cut leaning grass, and with its rear edge thick to obtain the required strength, and the under surface inclined and so arranged that it may act like a runner to pass and ride over the surface of the ground, to keep the cutting edge of the sickle clear of obstructions, whilst at the same time it can have access to leaning grass, all substantially as described.

C. H. McCORMICK.

No. 973.—*Improvement in Reaping and Mowing Machines.*—What is claimed as the invention of Leander J., William S., and Cyrus H. McCormick, is, first, an improvement adapting the machine to mowing grass, consisting of the segmental pivotted frame, its gearing and the driving wheel, in combination with the main frame, having the cutting apparatus projecting on one side thereof and carrying the other portion of the gearing, the whole arranged substantially as and for the purpose specified.

Second. An improvement adapting the machine to reaping grain, consisting in the combination of the main frame carrying one portion of the gearing and having a platform, grain wheel, divider and cutting apparatus projecting on side thereof, with auxiliary frame-work, the other portion of the gearing, the driving wheel, a pivotal connection for uniting the two portions of the gearing and the two frames, and the toothed hinged sector and detent, to provide for shifting the main frame and platform to, and holding them at, different heights, substantially as described.

Third. An improvement applicable to the machine when adapted for either mowing grass or reaping grain, and consisting of the combination of the sector with the reversible detent adapted to performing the double duty of detent and guide, substantially as described.

C. H. McCORMICK.

No. 974.—*Improvement in Reaping and Mowing Machines.*—What is claimed as the invention of Leander J., William S., and Cyrus H. McCormick, is, the guard finger having a thin shank, a narrow neck, and a strengthening rib, substantially as described.

C. H. McCORMICK.

No. 975.—*Improvement in Machines for Cutting Grass, &c.*—I claim the combination of the sickle having the scalloped or indented edge and serrated reversed teeth, with a series of fingers, having the back reversed angles for supporting the grain or grass to be cut to the edge of the sickle, both above and below the edge, or above the edge only, substantially as described.

I also claim cutting out the middle of the upper parts of the fingers that project over the sickle as described, in combination with the vibrating sickle, as described, for the purpose specified.

C. H. McCORMICK.

No. 976.—*Improvement in Cutting Apparatus for Machines for Cutting Grass, &c.*—I claim the combination of a series of slotted fingers, with a vibrating scalloped cutter having projections on both its upper and under sides to facilitate the detachment and discharge of clogging matter, substantially as described.

C. H. McCORMICK.

No. 977.—*Improvement in Machines for Cutting Grass, &c.*—I claim, in the combined blade and bar of a scalloped vibrating cutter, making the bar extend behind the blade, substantially as described, for the purposes specified.

C. H. McCORMICK.

No. 978.—*Improvement in Water Closets.*—I claim, first, a cylindrical plunger or plug 3, substantially as specified, acting to close the water passage 2, at the time the water closet seat is depressed, irrespective of the weight on the seat as distinguished from a valve which requires compression to a given point before closing, as set forth.

Second. I claim the valve *g*, cylinder 3, and openings *x*, in combination with the seat *v*, and acting in the manner and for the purposes set forth.

Third. I claim in a valve for water closets a cup leather for controlling the motion of said valve in closing gradually, substantially as specified, said cup leather moving freely in one direction and closing against the containing cylinder in the other direction, and the leakage of water in said cylinder allowing the movement of said cup leather, as set forth.

Fourth. I claim the lever *p*, acted on by the seat simultaneously controlling the movements of the pan *r* and valve or cock for admitting water, as specified.

Fifth. I claim the combination of the lever *p*, latch *t*, and valve spindle *g h*, as described, for regulating the movements of the pan *r*, as set forth.

Sixth. I claim the valve for admitting water to the closet in combination with the trunk or hopper, when said valve is connected directly to the said hopper, for the purposes and as set forth.

Seventh. I claim, in a water closet in which the cock is attached to the hopper, a hollow arm *o*, or opening into said hopper, substantially as specified, for conveying leakage from said cock into the hopper, as set forth.

WILLIAM S. CARR.

No. 979.—*Improved Water Wheel*.—I claim, first, the arrangement of the lighter plate L, in the particular manner specified, and for the purpose set forth.

Second. The arrangement, in the particular manner specified, of the packing ring *i*, for the purpose set forth.

Third. The arrangement, in the particular manner specified, of the lip or projecting piece *e* of the buckets, for the purpose set forth.

Fourth. The arrangement, in the particular manner specified, of the regulating plate J, in combination with the peculiar specified device for operating it, for the purpose set forth.

Fifth. The employment or use of the dividing strip or ring inserted in the buckets, substantially as and for the purpose set forth.

Sixth. The fitting of the lower part of the box G, over the annular flanch *n* of the wheel, as shown, or in an equivalent way, so as to form a joint as nearly water tight as may be, in connection with the openings *l l*, in the plate *d*, and the oblique plates *m*, at the sides of the openings, as and for the purpose herein set forth.

Seventh. The employment for united use in one wheel of the lighter plate B, packing *i*, projecting lip or flanches *e*, or regulating plate J, and annular dividing plate A*, the whole being constructed, arranged, and operating in the manner and for the purpose set forth.

JAMES P. COLLINS.

No. 980.—*Improvement in Corn Shellers*.—First. I claim the combination of a plate E, which presses directly upon the ear while the corn is being shelled therefrom, with a spring F, arranged and operating as and for the purposes set forth.

Second. I claim the combination of the adjustable guard chain *j*, with the plate E, and spring F, whereby the plate is prevented from falling against the shelling wheels, although free to adapt itself to different sized ears; and whereby the plate E and spring F can be raised by an attendant while the machine is in operation, substantially as described.

Third. I claim the combination of the plate E, spring F, with the wheels B and D, constructed and arranged to operate in relation to each other, as and for the purpose set forth.

Fourth. I claim the combination of the adjustable shaft *e*, with the plate E, substantially as set forth.

Fifth. I claim the arrangement and combination of the obliquely acting adjustable spring F, set screw *k*, plate E, and adjustable guard chain *j*, as and for the purpose herein shown and described.

NATHANIEL DRAKE.

No. 981.—*Improvement in Springs for Railroad Cars and Carriages*.—What I claim as my invention is, primarily, combining and arranging two blades bent elliptically, with an intermediate plate curved or corrugated, so as that the intermediate plate acts only by tension or strain, apart from end to end, in the manner and for the purposes described.

Second. I claim the manner described of securing together the elliptical blades and tension bar at the ends, without rivets, pins, bolts, hinges, or screws.

P. G. GARDINER.

No. 982.—*Improved Night Light Reflector*.—I claim the arrangement of a series of reflecting surfaces, in an arch or dome form, over gas burners, so as to permit a current of air through the reflector, and strongly illuminate objects below the light.

JNO. WYBERD.

No. 983.—*Improved Steering Apparatus*.—I claim the above described steering apparatus, consisting essentially of the toothed segment M, traversing on the curved way P, and operating substantially as described.

WILLIAM GODSOE.

No. 984.—*Improved Window Stop*.—I claim the within described window stop, consisting of the roller C, the shank *m*, spring E, and lever K, or their equivalents, in combination with the inclined surface *d*, and operating substantially as set forth.

TURNER WILLIAMS.

No. 985.—*Improvement in Clover and Grass Seed Harvesters*.—What is claimed as the invention of Thomas S. Steadman, is the main frame or box A, which carries the pinion which drives the cutters, in combination with the arm or supplementary frame J, provided with axle *t*, and the main wheel and gearing, substantially as described, for the purposes specified.

I also claim the arm or supplementary frame, in combination with the master wheel and gearing, when said arm or supplementary frame is so connected with the main frame as to vibrate from and around the pinion shaft, substantially as shown and described, for the purpose set forth.

W. N. WHITELY, JR.

No. 986.—*Improvement in Clover and Grass Seed Harvesters*.—What is claimed as the invention of Thomas S. Steadman, is: in combination with the main frame or box A, and arm or supplementary frame F, on which is formed or secured the master wheel axle, the employment of a retaining arc H, or its equivalent, the whole constructed and arranged in such a manner that the main frame or box, and arm or supplementary frame, with its master wheel axle, will be held in parallel planes relatively to each other while they are moving up and down, substantially as and for the purposes herein set forth.

W. N. WHITELEY, JR.

No. 987.—*Improvement in Clover and Grass Seed Harvesters*.—What is claimed as the invention of Thomas S. Steadman is: Constructing the machine in such a manner that the attendant can, while riding on the machine, raise and lower in the arc of a circle and hold at different heights either end of the cutting apparatus, as herein before described, for the purpose specified.

W. N. WHITELEY, JR.

No. 988.—*Improvement in Vulcanizing India Rubber*.—What I claim is the process or method of curing India rubber, gutta purcha, or other vulcanizable gums or compounds thereof, by means of a hyposulphite of zinc, or other artificial preparation of zinc and sulphur, having like chemical constitution, properties, and qualities, as hereinbefore described, for vulcanizing India rubber and other vulcanizable gums or compounds thereof, without the use of raw or free sulphur, for the purposes of curing the rubber.

JONA T. TROTTER.

No. 989.—*Improvement in Fluid Lenses*.—I claim, first, the application and use of a magnet, or its equivalent, in the bottom of a glass globe filled with a colored fluid, for the purpose as herein set forth.

Secondly. I claim the arrangement and combination in a lantern of a light and glass globe filled with a colored liquid, when said globe is surrounded by two reflectors, facing opposite directions, and when said light is placed either before or behind the glass globe, so as to produce and reflect, by the use of only one light, a colored light in one direction and a white or colorless light in the opposite direction, in the manner substantially as described.

S. KAKELES.

No. 990.—*Improved Machine for Finishing Hair Brush Handles*.—I claim, first, the employment, in combination with a brush clamp G, or pattern H, or their equivalents, of a wheel D, is provided with V or gouged-shaped cutters b, or their equivalents, and which act upon the wood substantially as and for the purposes herein shown and described.

Second. The combination, with the pattern H of the brush clamp, of a supporting ledge or projection a*, or its equivalent, as and for the purpose herein shown and described.

Third. The combination of the guide F with the pattern H and cutter D, as and for the purpose herein shown and described.

Fourth. Centring the unfinished brushes in the clamp G by means of the bristles i, in connection with the strip or plate J, and the inner curved edge H, or its extension H¹, substantially as described.

THOMAS MITCHELL.

No. 991.—*Improvement in Skeleton Hoop Skirts*.—I claim a skeleton skirt constructed as herein described.

CÆSAR NEWMAN.

No. 992.—*Improvement in Printing Oil Cloths*.—I claim forming ornamental figured surfaces on oil cloths by raising at right angles with each other, by means of properly prepared blocks, parallel ridges or surfaces b d, substantially as described, to form, by the action or reflection of light, and with or without a plurality of colors, the damask ground and figure. It being understood that I claim the privilege of having either the ground or figure, one only, if desired, composed of dots or broken lines in order to obtain a similar effect.

JAS. ALBRO.

No. 993.—*Improvement in Oil Cloths*.—I claim, as a new article of manufacture, an oil cloth with an ornamental figured surface produced by means of raised lines or ridges, those forming the ground being at right angles to those forming the figure, substantially as described.

JAS. ALBRO.

No. 994.—*Improvement in Artificial Legs*.—I claim, first, curving or deflecting the jointed

extremities of the bars J so as to bring their axes of motion back of their line of direction, substantially as and for the purposes set forth.

Second. I claim the cord T and spring X acting upon the parts D and L, substantially in the manner and for the purpose herein set forth.

Third. I am aware that metallic springs have been employed to simulate the functions of the natural muscles, but experience has proved their inadequacy, both as respects the result obtained and their durability. I am also aware that India rubber or elastic cords have been used for the same purpose, and with no better results, and these I do not claim; but I claim the combination of the non-elastic tendon F, with the India rubber spring E, in such a manner that the required effect is derived from the compression and expansion of the material and not from its elongations and contractions, substantially as set forth.

Fourth. I claim the use of the block A, with its longitudinal and transverse axes, for producing the direct or antero-posterior, lateral and diagonal motions of the ankle joint in walking, while retaining the foot in its proper relative position to the leg, substantially as described.

Fifth. I claim providing the ends of the cords F with the enlargements, and with the conical socket fastenings G, to receive the same, substantially as described, in order to apply adjusting screws, for the purposes herein specified.

Sixth. I claim the manner of constructing the bearing portions of the knee joint, consisting of the upper and lower bearing blocks N N, each of which forms the quarter of a circle, more or less, corresponding with the axial bolt, the one being fixed in position, and the other adjustable by means of the screws s s, to admit of adjusting the parts together to prevent looseness and noise and to reduce and regulate the friction, substantially as and for the purpose herein set forth.

DOUGLAS BLY.

No. 995.—*Improvement in Attaching Paddle Wheels to Canal Boats.*—I claim, first, the bow wheels B, the connecting rods K, the rudder L, the operating lever O, constructed and arranged substantially as and for the purposes described.

Second. I claim the wheels B, constructed with twisted floats, in combination with the preceding.

Third. I claim the arrangement of the vertical slotted shaft N supporting the wheels B and gear wheel E, in combination with the preceding; the whole operating as described and set forth.

REUBEN JANE.

No. 996.—*Improvement in Apparatus for the Manufacture of Paper Pulp.*—We claim, first, having the pipe b, which passes through the hollow journal of the boiler, divided by a partition so that the steam may find exit through one compartment of the pipe and the contents of the boiler through the other compartment, as set forth.

Second. The employment of the perforated diaphragm p p¹, when arranged substantially as described, to protect the pipes h h¹ s s¹ and strain the liquids from the stock, as and for the purposes herein set forth.

Third. The arrangement of the boilers J J¹ with the surrounding envelope, substantially as herein shown and described, so that the resultant liquids of the boiling may be evaporated and also employed to cool down the boilers and surrounding envelope, as set forth.

Fourth. The arrangement of the basin g g below the boiler to receive the falling liquid, as and for the purposes described.

Fifth. We do not claim broadly the transferring of steam from one steam boiler to another, but we claim the injection of the steam arising from the boiling of the alkaline and other contents of the boiler J into the boiler J, and *vice versa*, substantially as and for the purposes herein shown and described.

Sixth. We claim the arrangement of the warming chamber S between the two boilers, and the combination therewith of the pipes T V W W, as and for the purposes described.

Seventh. We claim the arrangement and combination of the boilers J J¹, furnace A, and doors D D¹ E E¹ F F¹, so as to apply the furnace heat to either or both boilers at pleasure, substantially as herein shown and described.

Eighth. We claim the combination of the cylindrical bottomed vats K K¹, having the chimneys N N passing through them with the boilers J J¹, and for the purposes described.

GARDNER HOWLAND.
JOSEPH B. PALSER.

No. 997.—*Improvement in Manufacture of Paper Pulp.*—We claim the destruction or carbonization of the gummy, resinous, and other matters from which the fibre is to be set free, without injury to the fibre itself by the process herein described.

GARDNER HOWLAND.
JOSEPH B. PALSER.

No. 998.—*Improvement in Harvesters and Binders.*—What is claimed as the invention of Joseph E. Nesen is, first, in combination with the cutting apparatus, the endless apron C, having an intermittent motion for the purpose of carrying the cut grain to the binding hooks at intervals and in proper quantity to form a sheaf, substantially as herein described.

Second. The binding hooks D, or their equivalents, for gathering the cut grain in bundles, or sheaves, arranged and operating substantially as herein described.

Third. The combination of the endless intermittently moving apron C, with the binding hooks D, substantially as herein described.

Fourth. The combination of the discharging roller Z, with the apparatus for gathering and compressing the cut grain into sheaves, substantially as herein described.

HENRY BALDWIN, JR.

No. 999.—*Improvement in Harvesters and Binders.*—What is claimed as the invention of Joseph E. Nesen is, first, constructing the blade of the cutter of a reaping or mowing machine with a projection or rib *e*, or its equivalent, for the purpose of strengthening it, substantially as described.

Second. The combination of a scalloped cutter, having the projections or ribs *e*, or their equivalents, on its blade, with the slotted fingers through which the blade with its projection is arranged to play, substantially in the manner and for the purposes described.

Third. The combination of the angular projections or ribs *e*, or their equivalents on the blade, with corresponding angular shoulders in the slot of the finger, substantially as described, the shoulders and projections being so arranged that the angles of one will vibrate past those of the other in such near proximity as to facilitate the detachment and discharge of clogging matter, substantially as described.

HENRY BALDWIN, JR.

No. 1,000.—*Improvement in Grain Separators and Cleaners.*—I claim, first, the combination of the distributing and equalizing cylinder I, with the separating cylinders D and E, the same being used as and for the purpose specified.

Second. The arrangement of the cylinder I, and adjusting spring N, or their equivalents, with the cylinders D and E, and with the brush F, when the same are used substantially as and for the purpose specified.

WM. M. ARNALL.

No. 1,001.—*Improvement in Seeding Machines.*—What I claim as the invention of J. H. Bonham, deceased, is a revolving peripheral seed discharger, having its axis in a horizontal position and in a line with the forward motion of the machine, or in a position suitably approximating thereto.

I also claim adjusting the seed discharger to different positions approximating to said horizontal and line of motion position.

In combination with a revolving peripheral seed discharger, having its axis placed as above specified,

I also claim adjusting or regulating the quantity of seed discharged through the said seed discharger.

I also claim the conducting spout L, in combination with the stopper block *q*, and tilting pins *n n*, arranged and operating substantially in the manner and for the purpose herein specified.

A. E. BONHAM,

Administrator of the Estate of J. H. Bonham, deceased.

No. 1,002.—*Improvement in Circular Saw Mills.*—I claim, first, the application to circular saw frames, of rocker boxes and a swing frame, for the purpose of affording end play to the arbor, as set forth.

Second. The application of a reaching agent to the central part of a circular saw through the medium of the mandrel, or by any other substantially equivalent means, for the purpose of restoring the saw to line after it has been deflected.

Third. Suspending a circular saw frame in position and restoring it to line, by means of the driving belt, arranged and operating substantially as set forth.

NICHOLAS G. NORCROSS.

No. 1003.—*Improvement in Reaping Machines.*—I claim, first, supporting the arm or lever of a vibrating sweep rake, at each end, substantially as described.

Second. Operating an automatic sweep rake by gearing on both ends thereof, in combination with the platform of the harvesting machine, for delivering the grain in gavels, substantially as described.

WM. H. SEYMOUR.

No. 1,004.—*Improvement in Reaping Machines.*—I claim the combination of the arm, rod,

or lever, which carries a vibrating sweep rake, with a guide rod, which forms a movable fulcrum for the rake head, substantially as described, for the purpose set forth.

WM. H. SEYMOUR.

No. 1,005.—*Improvement in Reaping Machines*.—I claim the arrangement of a quadrant-shaped platform, immediately behind the cutting apparatus, so to receive the cut grain as it falls, and from which it is discharged in the arc of a circle, substantially as described.

WM. H. SEYMOUR.

No. 1,006.—*Improved Method of Uniting the Panels of Portable Fences*.—I claim forming or providing the ends of the panels or sections of a fence with hooks and eyes, substantially as herein specified, to receive each other respectively in succession, and thereby to sustain and lock the said panels or sections together, in the manner and for the purposes set forth.

CHARLES VAN DE MARK.

No. 1,007.—*Improvement in Mowing Machines*.—I claim, first, hinging the right end of the coupling arm R to the lugs R¹ R¹, in combination with curving up the coupling arm, as it extends towards the machine, substantially as shown and set forth.

Second. I claim the combination of the shoe or brace, which supports the heel of the finger beam, with the hinge by which it is drawn, arranged above the plane of the cutter and in advance of the heel of the finger beam, substantially as set forth.

Third. I claim connecting the coupling arm to the shoe by a hinge whose axis of motion is on a line with that of the draught hinge of the finger beam, in combination with so arranging said hinges as respects the main frame, as that the strain due to the draught or drawing of the finger beam forward will be borne by one end of the main frame, and on one side of the axes of the driving and bearing wheels, while the lateral strain, through the coupling arm, will be borne by the other end of the main frame, and on the other side of the axes of the driving and bearing wheels.

EPHRAIM BALL.

No. 1,008.—*Improvement in Mowing Machines*.—I claim, first, extending and hinging the coupling arm R, to the shoe which supports the heel of the finger beam, outside of the frame, in combination with the draught hinge of the shoe, also outside of the main frame, whereby the finger beam and cutting apparatus can be first raised up bodily until the coupling arm strikes against the under side of the frame, and then the outer end thereof turned up towards the frame, substantially as set forth.

Second. I claim mounting the two driving gear wheels and main gear wheel on separate axes, in combination with a ratchet wheel and small gear wheel for each driving gear wheel, each ratchet wheel being fitted with a pawl that can be made to stand in gear by the forward motion of the machine, and out of gear by the backward motion of the machine, the whole arranged and operating substantially as set forth.

Third. I claim the combination of a ratchet wheel, a pawl, a spring acting on the pawl, and a case with one or both ends of the shaft of the main gear wheel, whereby the case is made to perform four duties, namely: a support to the pawl, a support to the spring, a cover to protect the pawl, spring, and ratchet, and the connection by which motion is communicated to the shaft of the main gear wheel, substantially as set forth.

Fourth. I claim the combination of a shield E², with each of the cases G G¹, and ratchet wheels H, substantially as set forth.

Fifth. I claim the combination of the balance wheel L, with shaft R, and gear wheels I J, whereby the balance wheel is made to perform not only the function of a balance wheel to regulate the motion of the crank shaft, but also that of a guide or guard and shield to keep the gear wheels I J in their proper and relative positions, substantially as set forth.

Sixth. I claim the combination of a balance wheel with each end of the crank shaft and its hangers or bearings, substantially as set forth.

Seventh. I claim making the pitman in two parts N N¹, in combination with uniting said parts, substantially as set forth.

Eighth. I claim the combination of a hinged cutting apparatus with a pitman or connecting rod swivelled at both ends, substantially as set forth.

EPHRAIM BALL.

No. 1,009.—*Improvement in Mowing Machines*.—I claim, first, the combination of the hangers which support the crank shaft, and coupling arm, with the central pieces A¹ A¹, whereby the hangers are made to perform the additional function of braces to the main frame, substantially as set forth.

Second. I claim so constructing and combining a hinged finger beam with a main frame as that no part of the finger beam will project by the rear of the main frame, nor any part of the main frame by the rear of the finger beam, whereby an attendant can freely approach the

finger beam from the rear and raise up the outer end thereof to avoid an obstruction, while the heel of the finger beam is free to rest on the ground, and to conform to the inequalities thereof independently of the up and down motions of the main frame, substantially as set forth.

Third. I claim the combination of the coupling arm and finger beam with the slotted metallic part S, whereby the finger beam and cutting apparatus, when turned up towards the main frame to avoid and pass obstructions, will be prevented from falling over against the main frame, substantially as set forth.

Fourth. I claim the combination of the finger beam with the coupling arm and a stop, whereby a portion of the weight of the finger beam as it is raised up bodily, after the outer end has been turned up to pass an obstruction, will rest on the left hinge of the coupling arm, substantially as and for the purposes set forth.

EPHRAIM BALL.

No. 1,010.—*Improvement in Mowing Machines.*—I claim, first, the combination with the main frame of a mowing machine, of two independent driving wheels, and a hinged cutting apparatus, whereby the cutters are kept in operation when the machine is turned either to the right or left, while the cutting apparatus, or either end thereof, is free to conform to the inequalities of the ground, independently of the up and down motions of the main frame, substantially as set forth.

Second. I claim hinging one end of the coupling arm R to lugs on the shoe which supports the heel of the finger beam and cutter bar, in combination with hinging the other end on a line with the longitudinal centre of the crank shaft, which operates the pitman and cutters, substantially as set forth.

Third. I claim the combination of the heel of the finger beam P, and one end of the coupling arm R, with a strong metallic draught shoe, substantially as set forth.

Fourth. I claim so hinging the shoe which supports the heel of the finger beam to the main frame, as that it will permit the heel of the finger beam, to which it is rigidly attached, to move freely in the arc of a circle, as it rises and falls, so as not to cramp or bind the joints of the coupling arm R, or its equivalent, substantially as set forth.

EPHRAIM BALL.

No. 1,011.—*Improvement in Mowing Machines.*—I claim the combination in a mowing machine of the following elements, namely: a rigid tongue to draw and steady the machine by a frame to support and carry the driver and gearing, two independent driving and bearing or supporting wheels to carry the frame and give motion to the cutters, and a short finger beam so hinged to the main frame that its progressive movement over the ground will be controlled by the main frame and the upward and downward movements of the entire finger beam or of either end thereof, independently of the other, by the undulations of the ground over which it is drawn.

EPHRAIM BALL.

No. 1,012.—*Improvement in Mowing Machines.*—I claim, first, the combination of the finger beam and the main frame, with a single yielding brace bar or shoe, whereby the progressive movement of the finger beam over the ground will be controlled by the main frame, and the free upward and downward movements of the entire finger beam, or of either end independently of the other, and of the up and down movements of the main frame by the undulations of the ground over which it is drawn, substantially as set forth.

Second. I claim the combination of a yielding brace bar or shoe Q, and a yielding coupling arm R, with the main frame, substantially as set forth.

Third. I claim the combination of the short finger beam, with the yielding connection with the main frame, substantially as set forth.

EPHRAIM BALL.

No. 1,013.—*Improvement in Mowing Machines.*—I claim, first, the combination of a hinged folding finger beam with the main frame, whereby the finger beam can be raised, turned, or folded up, on or over the main frame, without detaching the draught hinge, to facilitate the removal of the machine from place to place, or from field to field, substantially as set forth.

Second. I claim so hinging the finger beam to the main frame as that the weight of the finger beam, when folded up thereon, shall rest on or be borne by the main frame in front of the axes of the main supporting wheel or wheels, substantially as set forth.

Third. I claim the combination of the finger beam with the main frame and mechanism, so constructed and combined therewith as that the finger beam can be raised bodily, and when turned and held up, to render the removal of the machine from place to place more convenient, expeditious, and safe, substantially as set forth.

Fourth. I claim the combination of the finger beam with the main frame, whereby the finger beam can be raised, turned, or folded over, on or above the main frame, so that its

weight shall be borne by the main frame in rear of the axis of the supporting wheels, substantially as herein described.

Fifth. I claim the combination of the finger beam with the main frame, whereby the finger beam can be raised and turned over above the main frame, with its weight resting either in front or in rear of the axis of the main supporting wheels, substantially as and for the purposes herein set forth.

Sixth. I claim so hinging the finger beam to the main frame as that the main frame shall be nearly balanced laterally when the finger beam is folded up thereon, substantially as set forth.

Seventh. I claim so hinging the finger beam to the main frame as that it can be folded under the main frame, substantially and for the purposes set forth.

Eighth. I claim the combination of the finger beam with the main frame so that the finger beam can be either folded over or under the main frame, substantially as set forth.

Ninth. I claim the combination of the following elements in a shoe or metallic device for supporting the heel of the finger beam, viz: a curved surface, to run upon the ground like a runner; a recess, or arrangement of parts, whereby the heel of the finger beam will have a rigid metallic support in front, on the bottom, and in rear; a suitable groove for the heel of the cutter bar and inner cutter to play in; two metallic lugs on the side next to the main frame, between which to hinge a coupling arm; all combined in one rigid and permanent shoe device.

Tenth. I claim the combination of the following elements in a metallic shoe for supporting the outer end of the finger beam, viz: a curved surface to run upon the ground like a runner; a recess for the outer end of the finger beam, whereby it can be bolted to the shoe so as to have a rigid support in front, on the bottom, and in the rear; a groove for the outer end of the cutter bar and outer cutter to work through; and two lugs in the rear; said elements being combined and arranged in relation to each other, substantially as shown and described.

EPHRAIM BALL.

No. 1,014.—*Improvement in Air Engines.*—I claim the within described auxiliary heater, constructed and arranged as set forth, the exhaust air and the products of combustion being passed through in one direction, while the cold air from the the force pump is passed through in the other, by which means the heat is extracted from the heated air and smoke and transferred to the cold air on its way to the engine, the latter being pumped in against a pressure much less than that at which it is worked off from the main heater, as explained.

Second. I do not claim the use of cold water for the purpose of refrigerating the cylinder or piston of hot air or other engines; but what I do claim as my invention, and desire to secure by letters patent, is the arrangement herein described of the tubes within the piston rod, the reservoir R, and the India rubber tubes S S¹, for the purpose set forth.

Third. I claim passing the exhaust air which has propelled the piston directly through the fire, for the purpose of economizing heat, as set forth.

PHILANDER SHAW.

No. 1,015.—*Improvement in Folding Bedsteads.*—I claim, first, the employment of a frame hinged in the centre and connected to the two ends of a bedstead, for the purpose of folding the whole bedstead together endways, in the manner described.

Second. In combination with said folding frame, I claim the hook-shaped ends to the side rails, taking bolts attached to the posts, and forming hinges at these points for folding the hinged frame, or allowing said frame to be disconnected from the posts as specified.

Third. In combination with said frame hinged to the centre, I claim the pendent legs, Fig. 9, and the braces k, for the purposes and as specified.

THOMAS B. BLUCKER.

No. 1,016.—*Improved Feed Water Apparatus for Steam Boilers.*—I claim the combination of the cylinder A, connected with the boiler as described, the piston D working in the said cylinder and having an attached valve, whose movements to open and close the communication between the said cylinder and the boiler are effected by the said piston or its rod, substantially as herein described; a lifting and disengaging apparatus for lifting and dropping the said piston and valve, and a connection between the piston and a cock or valve in the suction pipe, or its equivalent, the whole operating substantially as herein described to control the supply of water to the boiler.

And in combination with the above specified apparatus, I claim the alarm cock V, applied in connection with the piston, to operate substantially as herein set forth.

GEORGE W. RAINS.

No. 1,017.—*Improved Shoe for Grain Separators.*—I claim, first, the combination and arrangement of an inclined lagged chaff and straw elevator C I, primary inclined return sieve or board F, and separator shoe A, substantially and for the purposes set forth.

Second. The combination of a secondary inclined extension tail or return board R, with

the chaff elevator C I, incline sieve, or primary return board F, and separator shoe A, substantially as and for the purposes set forth.

Third. The combination of an inclined lagged elevator C I, with a separator shoe A, when said elevator is placed in rear of and above the main cleaning sieve of the shoe in an inclined position, substantially as set forth.

HIRAM ALDRIDGE.

No. 1,018.—*Improvement in Gas Regulators*.—I claim, as my invention and improvement in gas regulators, a stop-cock, situated in, and controlling the passage way, from the gas holder or other source of supply to the variable chamber, in combination with the removing part of the variable chamber, substantially as described.

SALMON BIDWELL.

No. 1,019.—*Improvement in Photolithography*.—We claim the employment of a solution of gumarabic sensitized by bichromate of potash, or its equivalent, in combination with the surface of a lithographic stone or plate of zinc, when acted upon by light, as a resistant to the effects of a solution of soap and application of printer's ink, for the purpose of combining the soap and ink with the stone or plate of zinc, as substantially set forth in this specification.

We also claim the employment of sugar, or its equivalent, in combination with gumarabic and bichromate of potash, in connection with a lithographic stone or plate of zinc, for the purpose of modifying the adhesive quality of the coating to the stone or zinc in the parts not acted upon by the light, in the manner as set forth in the specification.

We also claim the employment of a solution of soap, or its equivalent, for the purpose of forming the printing surface with the stone or plate of zinc, in combination with the sensitized gumarabic, to produce the positive photographic picture, in the manner as set forth in this specification.

J. A. CUTTING.
L. H. BRADFORD.

No. 1,020.—*Improvement in Ship's Windlasses*.—I claim the combination applied to each chain wheel H and the shaft wheel B, the same consisting of the part pinions G G¹, the guard sectors I I, the pawls J J, the levers K K, and the studs h¹ h¹, the whole being made to operate together and be operated by the shaft B, substantially in manner and for the purpose as specified.

I also claim the combination and arrangement of the gears C D N O, and their ratchet and pawl mechanisms, or equivalents therefor, applied to the two shafts B E, substantially in manner and for the purposes as specified.

I also claim the arrangement of the auxiliary capstan F with the main capstan a and its shaft E when the latter is connected and made to operate another shaft B by gears C D, as described.

WM. H. GILMORE.

No. 1,021.—*Improvement in Printing Presses*.—I claim, first, a bed vibrating to and from the impression, in combination with a rocking platen, rocking to and from the impression, for the purpose herein set forth, substantially as described.

Second. I claim rocking the inking roller arms or frame upon a centre so that the inking rollers may pass and repass over the form of types for each and every impression, whether said rocking frame be constructed in the precise manner described or in some equivalent way to produce a like result.

Third. I claim the bearers, or their equivalents, in combination with the rocking inking roller arms or frame for the purpose of passing and repassing the inking rollers over the type or form in a line parallel with the face of the type, when each rocking roller frame shall carry the inking rollers forward and backward over the type for each and every impression.

Fourth. I claim vibrating the bed from the point of its receiving the inking rollers to the point of impression, as described.

Fifth. I claim the rocking inking roller arms or frame, in combination with a vibrating bed, substantially as herein specified.

Sixth. I claim constructing a printing press with a rocking platen, so that the pressman, while feeding and driving the press, may stand directly in front of said press for such purpose, and be enabled, without changing his position, to see the face of such rocking platen as it rocks or turns towards him for the reception of the sheet to be printed, the face of the type or form as it moves to and from the impression, the ink distributing cylinder, or its equivalent, from its being placed at the top of the press, and the inking rollers when inking the type or form; thereby enabling said pressman to detect any imperfection in the working of these parts of the press; all substantially as herein set forth.

GEO. P. GORDON.

No. 1,022.—*Improvement in Printing Presses*.—I claim, first, supporting upon a centre or

centres a platen which shall rock or turn between the point necessary for the reception of the impression, and the point necessary for the reception of the sheet to be printed, when the face of such rocking platen shall stand out of a horizontal position, or at any angle from a horizontal position, at the time the impression is given, substantially as herein set forth, and for the purposes described, whether the same be accomplished in the precise manner specified, or in some equivalent way.

Second. I claim the frisket grippers, or their equivalents, for relieving the sheet from the type, in combination with a rocking platen.

Third. I claim giving to a rocking platen, when receiving the sheet to be printed, or when receiving the impression, a period of rest during the continued motions of other parts of the press.

GEO. P. GORDON.

No. 1,023.—*Improvement in Wooden Soled Shoes*.—I claim the manufacture of boots and shoes as described, viz: a boot or shoe having a wooden sole made in two parts or pieces, (an inner sole *b* and an outer sole *a*,) with the edge of the upper secured between them, and the two soles fastened together by any suitable fastenings, substantially as described.

HENRY WRIGHT.

No. 1,024.—*Improvement in Apparatus for Naphthalizing Gases*.—I claim the above specified arrangement and application of the float, scroll, and disk, whereby they are rendered capable of easy and proper adjustment, as explained.

Also the combination of one or more propelling wings, or the equivalents thereof, with the scroll and float when applied and used within a cistern, substantially in manner and for the purpose as described; such propelling devices being to facilitate or effect the rotation of the said float and scroll while buoyed within the liquid, as described.

Also the application and arrangement of the foraminous diaphragm with respect to the cistern and eduction pipe of the apparatus, as described.

E. H. ASHCROFT.

No. 1,025.—*Improvement in Lamp Shades*.—We claim, first, the combination of the metallic shade *A A¹ A²* with the paper pictures *C¹ D¹ E¹* between sheets of mica, as above described.

Second. We also claim the combination of the metallic frame *A A¹ A²*, and the pictures *C¹ D¹ E¹*, upon paper, or any other suitable substance, substantially as above described.

Third. We also claim the combination of the metallic frame *A A¹ A²* and the pictures *C¹ D¹ E¹* upon paper, or any other suitable substance, and the mica lining; the whole being arranged substantially as herein set forth.

CHARLES WILHELM

ANNA CATHERINE WILHELM.

No. 1,026.—*Improvement in Fire Plugs*.—I claim, first, the construction of the chamber *J*, so as to make it answer the double purpose of a thoroughway for one or more branch pipes, and a readily accessible chamber for the reception of a valve or valves, thus making one pit and one cover common to two, three, four, or more mains, instead of several, as now required, all substantially as set forth.

Second. Combining a fire plug with the chamber *J* and its branches when the valve *V* is located, as described, for the purpose of effecting a circulation of the water under the valve of the fire plug to prevent it freezing.

Third. The combination with the fire plug and chamber *J* and branch pipes of the detachable many-valved hose branch, (Figs. 8 and 10,) when the said parts are constructed, as described and arranged, so that the nozzles of the hose branch stand at a convenient height above ground for attaching the hose, substantially as herein shown and described.

Fourth. The removable gasket *c*, in the ends of the branches or bowls *y*, so as to renew the seats for the valves *b*, when necessary, without disturbing the main or stop cock, access to these gaskets being through the common chamber *j*, as herein stated.

JOSEPH L. LOWRY.

No. 1,027.—*Improvement in Stoves*.—I claim the employment of diffusing plates, constructed substantially as herein shown and described, to promote the uniform distribution of the hot air, as set forth.

I also claim the arrangement and combination of the perforated plates *N R*, the partitional plate *B*, the flue *H*, the fire guard *I*, hot air pipe *L*, and chamber *K*, substantially as and for purpose shown and described.

PETER N. BURKE.

No. 1,028.—*Improved Method of Elevating and Delivering Water from Wells*.—I claim, first, operating the valve in the bottom of the bucket by the rear end of the trough, the lever

actuating the trough being moved by the bucket, and the trough having a more rapid advance than the bucket, as herein set forth.

Second. I also claim, in combination with the above, the employment of a grooved pulley and weight, to operate the bucket, having a strip of India rubber fastened in the groove of said pulley, in the manner and for the purpose set forth.

JOHN W. WHEELER.

No. 1,029.—*Improvement in Trigger Operating Revolving Fire Arms.*—What I claim as the invention of Stanhope W. Marston is, first, so constructing the lock of revolving breech fire arms, which may be operated by trigger, as that the hammer, when raised to full cock preparatory to firing, may be retained in that position of unstable equilibrium until the piece is fired, on a further pressure of the trigger, by means of a vibrating tooth or fly tumbler, independently of any dog, pawl, catch, or other mechanical device for that purpose.

Second. So constructing and arranging the lock of revolving breech fire arms, susceptible of operation by trigger, as that, when the hammer is raised to cock, preparatory to firing, the trigger shall be held back or retained in a drawn position by means of a vibrating tooth or fly tumbler.

Third. The use, in revolving breech fire arms, of a vibrating tooth or fly tumbler, interposed between the hammer and trigger, and operating, substantially as hereinbefore described, by an upward pressure on the hammer, so as gradually to increase the leverage and consequently the power applied to raise the hammer, and thereby reduce the effective resistance of the main spring, for the purpose of securing steadiness of aim and greater ease in firing, and also to allow the recovery of the trigger, after firing, for repeated action.

JAMES M. COOPER.

No. 1,030.—*Improvement in Machinery for Making Hat Bodies.*—I claim the combination of a vibrating concave surface, substantially as described, with an exhausted pervious cone, on which the bat of flocculent fibres is held by the pressure of the surrounding air, substantially as and for the purpose specified.

I also claim facilitating the removal of the bat from the pervious cone, on which it is formed, by means of a blast of air forced into the cone, substantially as specified.

ALVA B. TAYLOR.

No. 1,031.—*Improvement in Safety Apparatus for Steam Boilers.*—I claim the employment of a flexible vessel, substantially as described, when the inside of such vessel is combined and connected with a steam boiler, to be expanded by the steam generated therein, and the outside with the mechanism which operates the damper, or its equivalent, for regulating the draught or blast of the furnace, substantially as and for the purpose specified.

TIMOTHY CLARK.

No. 1,032.—*Improvement in Lamps.*—I claim an air chamber, in combination with the chamber formed by the concavity of the deflector of a lamp top, substantially as described.

I also claim the combination of an air chamber for supplying air to the interior of the cone with openings for the admission of air, on the outside of the cone, between the latter and the inside of the chimney, substantially as set forth.

I also claim forming a communication between the oil chamber and the cone chamber *o*, by means of openings in the shell of the lamp top, substantially as described, for the purpose set forth.

MICHAEL A. DEITZ.

No. 1,033.—*Improved Machine for Making Paper Bags.*—I claim, first, cutting off the paper from a continuous roll in a machine for making bags by a cut of such form that when a bag is completed one side of the mouth is caused by the form of the said cut to project beyond the other side, substantially as represented in Fig. 12, to afford facility for opening the bag and to form a flap for closing the mouth.

Second. Giving the blades of the side shears *J J¹ J J¹* a curved angular or irregular form near the point, for the purpose of cutting out each by a single cut the whole piece necessary to leave the lap on one side of the bag, substantially as represented in Figs. 4 and 10.

Third. Hanging the movable blades *J¹ J¹* of the said shears on shafts or pivots *j j* perpendicular to their faces, for the purpose of allowing them to cut slightly across the fixed blades by a slight lateral movement, which they receive simultaneously with the movement usually given to shears, substantially as described.

Fourth. The intermittently rotating folder, arranged and operating substantially as described, to receive the bag pieces from the apron *L*, after the cutting and pasting operations, and to support or partly support them until the creasers come into their operative positions and afterward to hold them over the creasers.

Fifth. The combination of the side lappers *N N* and the folding stands *d d* substantially

as described; that is to say, the stands being so placed as to support the bag piece and the creasers during the folding and lapping operations, and to allow the folder to pass between them and the lapping pieces, being attached to the said folding stands in such a manner as to be capable of falling over those creasers which are supported by the folding stands. This I claim irrespective of any manner of operating the lappers and whether the folding stands have the lateral movement described or are stationary.

Sixth. The toothed roller T, hung in a frame T¹ from the axle of one of the pressing and delivery rollers, and operating substantially as described, to commence the removal of the bags from the creasers.

Seventh. The general arrangement and combination of the several working parts of the machine, substantially as herein described.

E. W. GOODALE.

No. 1,034.—*Improvement in Vapor Lamps.*—I claim, first, combining the cap or heat retainer H with vaporizing tube or retorts, constructed substantially as described, when so arranged over the flame as to operate in the manner set forth.

Second. I also claim the combination of the heat retainer H, and vaporizing tube connected substantially as described, with the elevated reservoir, the whole arranged and operating with respect to the valve C¹, and burner K, as set forth.

Third. The syphonic vapor or gas generating tube or retort B A, or its equivalent, whereby the material, from which the gas is generated, is carried over or above the flame of the gas or vapor burner, and subjected to the heat of the flame issuing therefrom, and converted into gas or vapor, substantially as set forth.

ALONZO M. MACE.

No. 1,035.—*Improvement in Bakers' Ovens.*—I claim the method of "setting" and "drawing" bread, &c., substantially as herein set forth, namely, by means of cars or detached platforms made to move into and out of the oven automatically, in the manner described.

I also claim the method of baking bread, &c., substantially as herein described, that is to say, by the employment, in combination with an oven, of cars or detached platforms, so arranged and supported, that, while in the oven, they shall be conveyed in vertical tiers through the same, and shall be made to move horizontally into and out of the said oven.

I also claim transferring each car, as it arrives successively at the end of its series, to a tier or series which is moving in an opposite direction, whereby said cars may readily be operated automatically, both while in the oven and while entering and emerging from the same.

H. BERDAN.

No. 1,036.—*Improvement in Seed Planters.*—I claim a seed planting machine, constructed principally of frame work, the front part of which is supported on not less than two runners or shoes, with upward inclining edges, and the rear part supported on not less than two wheels, the latter being arranged to follow the former, substantially as and for the purpose set forth.

GEO. W. BROWN.

No. 1,037.—*Improvement in Seed Planters.*—I claim the construction of a shoe or runner for seed planting machines, with an upward inclining edge, and its point sufficiently high or raised as that it will climb up and over, or cut or break through, intervening obstacles, without materially forcing the earth laterally at its front part, and widening towards its rear end, so as to open out a gash or furrow in which the seed to be planted may be deposited, and long enough to furnish a support to the frame work, substantially as described.

GEO. W. BROWN.

No. 1,038.—*Improvement in Seed Planters.*—I claim, in combination with a seed planting machine, constructed principally of frame work, with not less than two runners, and not less than two wheels, a hinged joint between the point of the tongue, and with the rear part of the machine, so that one part of the frame work may be raised, lowered, adjusted, or supported on the other part, substantially as described.

GEO. W. BROWN.

No. 1,039.—*Improvement in Seed Planters.*—I claim a seed planting machine, wherein the seed dropping mechanism is operated by hand, or by an attendant, in contradistinction from "mechanical dropping," the mounting of said attendant upon the machine in such position that he may readily see the previously made marks upon the ground, and operate the dropping mechanism to conform thereto, substantially as herein set forth.

I also claim, in combination with a seed planting machine composed substantially of frame work, and upon which the person who works the seed slides or valves, sits or stands, a lever,

or its equivalent, by which a driver or second attendant may raise or lower that part of the frame work that carries the attendant and the seeding devices, and thus ease the machine in passing over intervening obstacles, or in turning around, substantially as described.

GEO. W. BROWN.

No. 1,040.—*Improvement in Seed Planters*.—I claim, in combination with a seed planting machine carried mainly by, or supported mainly upon, not less than two runners, and two covering wheels, a pair of auxiliary wheels and an axle, for the double purpose of taking a portion of the weight off from said runners and covering wheels, and for affording the means of readily converting the machine from a hand planter to an automatic seed sower, substantially as described.

I also claim hanging the axle of the auxiliary wheels in hinged and adjustable arms or levers, so that more or less of the weight of the machine may be placed upon said auxiliary wheels, substantially as described.

GEO. W. BROWN.

No. 1,041.—*Improvement in Gang Ploughs*.—I claim, first, the combination of the driving shaft *d*, and pinions *e*, the counter shaft *f*¹, and pinions *f*, the short shafts *g*, and the pinions *i*, with the internally geared spur wheels *h*, when arranged and operating with ploughs, substantially as and for the purpose set forth.

Second. Raising and lowering the ploughs, substantially in the manner described, by an apparatus operated by the power of the engine when the said apparatus is under the control of the engineer.

Third. A projecting frame at the rear of the engine, when the same is arranged to overhang the ploughs and is sufficiently elevated to permit them to be raised above the axle of the supporting wheels, or the lowest position of the frame, whereby the engine is enabled to pass over obstructions with facility.

Fourth. The combination, in a steam plough, of a hoisting apparatus, operated by the power of the engine, with an overhanging frame, substantially as described, for the purposes set forth.

Fifth. The steering apparatus, arranged and operating as described, in combination with the frame gearing and ploughs herein described, for the purpose set forth.

Sixth. The combination of the steering wheel *c*, driving wheels *b*, overhanging frame *r*, and gangs of ploughs I, II, III, when arranged and operating substantially as described for the purpose of cultivating between the rows of standing crops.

Seventh. The combination of the straining frame *n*, and adjusting screws *n*³, with the hinged side pieces *m*², of the plough frame, substantially as described for the purpose set forth.

Eighth. The ratoon or stubble cutter C, Fig. 5, applied substantially in the manner set forth, in combination with a gang of ploughs.

Ninth. The plate Y, applied at the lower part of subsoil ploughs, substantially as explained, for the purpose of elevating the subsoil previous to turning.

HENRY COWING.

No. 1,042.—*Improvement in Hay Making Machines*.—I claim, first, the rake head shaft furnished with friction wheels or rollers, which are arranged on pivotted lever bearings, in combination with driving wheels, which are furnished with a plain flange for the friction rollers to act against, so that the necessary friction may be produced either by means of the specified lever arrangement or by the same, in combination with the gravity of the rake head, substantially as and for the purpose set forth.

Second. I further claim arranging or setting the bars N, in the heads D D, in such a manner that the teeth may be adjusted and given any desired angle by the mechanism, and essentially in the manner herein described.

J. C. STODDARD.

No. 1,043.—*Improvement in Sleeping Cars for Railroads*.—I claim the use of two cushioned backs C C, so that they, when standing on edge and resting against the partitions, form, with the bottom cushions, comfortable seats for passengers, and when adjusted so as to lie horizontally on a level with the bottom cushions within the space, existing between the two seats, form, with the bottom cushions and the partitions, a comfortable enclosed sleeping couch, substantially as set forth.

ELI WHEELER.

No. 1,044.—*Improvement in Roofing Composition*.—I claim, first, saturating the canvas in the mixture or composition herein described and set forth, under the head of No. 1, and then applying the soap stone, in the manner described, to the saturated canvas.

Second. Covering the soap stone saturated canvas with the cements compounded from the ingredients, and in the proportions set forth under the heads of Nos. 2, 3, and 4 of this speci-

fication; the whole being intended to form one composition for roofing and similar purposes, produced from the mixture of the ingredients herein described, in the proportions and for the purposes set forth.

HENRY LESTER.

No. 1,045.—*Improvement in Grain Separators*.—I claim, first, the combination of the zig-zag screens and boxes B C, having a shake motion given them, so as to have the grain pass consecutively over and through them, and arranged relatively with each other, to operate substantially as and for the purpose set forth.

Second. The inclined zig-zag screens and boxes B C, with or without the troughs E, in connection with the revolving fan G, and spout H, arranged substantially as and for the purpose set forth.

JONATHAN L. BOOTH.

No. 1,046.—*Machine for Feeding Paper to Printing Presses*.—We claim feeding single sheets of paper to a printing press, paper ruling, or other machine, requiring the feed of a single sheet at a time, by means of the feed roller I, and friction stop J, or the equivalents thereof, when the same are arranged and combined essentially as set forth.

We also claim, in combination with the roller I and friction stop J, the feed roller G, or its equivalent, substantially as described, for the purposes herein set forth.

GEO. H. FERGUSON,
SYLVESTER FERGUSON.

No. 1,047.—*Improvement in Lamps*.—I claim, first, the perforated plate C, or the gauze wire C, for the purpose of regulating the elastic force of the air, so that it may be presented evenly to the flame, or their equivalent.

Second. I claim the perforations *b*, in the lower part of cap D, as shown in Fig. 1, in combination with the perforated or air distributing plate C, or the gauze wire C, or their equivalent.

Third. I claim the register formed of the perforations *e* in the bottom A, as shown in Fig. 5, in combination with the perforated plate or gauze wire C, and the holes *b*, in the lower part of cap D, as shown in Fig. 1, the whole being arranged substantially as and for the purpose herein described.

WM. FULTON.

No. 1,048.—*Improvement in Machinery for Manufacturing Cordage*.—What I claim in machinery for laying rope, is the employment of a condensing tube and laying block, or other equivalents thereof, in combination with the means of giving the fore twist to the strands, and the twist to the laid rope, substantially as described, or the equivalents thereof, for the purpose specified.

I also claim the series of flyers, turning in stationary bearings, to give the fore turn or twist to the strands, as described, in combination with the flyer for giving the twist to the rope, and provided with cross capstan, and means of giving tension to the rope, substantially as described.

WM. JOSLIN.

No. 1,049.—*Improved Plate Holder for Cameras*.—I claim bringing the different portions of a single plate, or several smaller plates, successively into the field of the lens of the camera, substantially in the manner and for the purpose specified.

ALBERT S. SOUTHWORTH.

No. 1,050.—*Improvement in Machines for Drying Cloth*.—I claim combining with the wheels armed with tenter hooks, substantially as described, the arrangement of rollers, or equivalent thereof, for presenting and drawing off the cloth, so that it shall form part of the periphery of a hollow vessel, substantially as described, and an apparatus, substantially as described, for introducing a blast of air through the segment of the periphery of the said hollow vessel, between the end wheels and between the place where the wet cloth begins to form the periphery of the said hollow vessel, and where the dry cloth is drawn off, substantially as and for the purpose specified.

B. SEXTON.

No. 1,051.—*Improved Regulator Valve for Steam Engines*.—We claim, first, the arrangement and combination of the valve box A, and casing C, as and for the purposes herein shown and described.

Second. The arrangement and combination of the screw socket *k*, stem *j*, rod *l*, arm *p*, groove *q*, and hand wheel J, so that, by turning the hand wheel J, the stem *j* may be ele-

vated and depressed irrespectively of the rise and fall of the rod *l*, and without rotating the latter; all as herein shown and described.

NATHAN C. TRAVIS,
NATHAN JOHNSON,
RICHARD EMERSON.

No. 1,052.—*Improvement in Heating Ores.*—I claim the described arrangement of the ore heater *E*, gate *F*, rod *G*, and doors *D* and *D*¹, in connection with the tunnel head *A*; the whole being constructed, combined, and operated in the manner and for the purposes herein set forth.

I also claim the open work basket grate *E*, in combination with the conical or bell-shaped open work *F*, when used in connection with the tunnel head of a blast furnace, substantially as described.

I also claim the conical or bell-shaped open work gate *F*, for the purpose of more readily diffusing the heat and gases through the ore, and of discharging the ore into the furnace when heated, substantially as described.

A. C. VANDYKE.

No. 1,053.—*Improvement in Breech-loading Fire Arms.*—I claim, first, the method herein described for operating or closing the breech, and forming a tight joint at the junction of the barrel with the breech, by the employment of a screw ferule or sleeve, fitting an outer screw thread on the barrel, and provided with a projecting annular flange for grasping and releasing the breech, and for drawing the same backwards and forwards in the direction of the barrel, to or from the rear end thereof upon said screw-threaded sleeve, being operated substantially as herein described.

Second. I claim, in combination with a movable box within the breech, constructed and operating as described, the packing thereof by means of asbestos, or its equivalent, substantially in the manner and for the purposes described.

Third. Locking the screw-threaded sleeve, that operates the breech, by forming the pivotted lever, which serves to turn said sleeve, with an eccentric or cam, arranged to act upon a locking pin by pressing down said lever after the breech is drawn tight, as herein set forth.

EDWARD LINDNER.

No. 1,054.—*Improvement in Breech Loading Fire Arms.*—I claim the employment of a hollow screw arranged to fit the rear end of the barrel, and serving to lock and open a suitable shifting breech piece, substantially as and for the purpose or purposes herein set forth.

EDWARD LINDNER.

No. 1,055.—*Improvement in Railroad Cars.*—I claim, first, the application of corrugated metal plates, combined with, and secured to, and upon, the angle irons *a, b, c, d*, for the construction of the bodies of railroad cars and other vehicles, as herein set forth.

Second. The application of the said corrugated metal plates and angle irons, combined with the trough irons *E*, as set forth, for the purposes described.

SAMUEL J. SEELY.

No. 1,056.—*Improvement in Machines for Drying Paper and Other Fabrics.*—I claim a drying apparatus, consisting of the combination of a drying chamber with inlet and outlet passages for insuring a circulation through it, an apparatus for heating the same, and suitable carrying rolls for suspending the fabric vertically, or nearly so, in the drying chamber, and for carrying it into and through the same.

Second. I claim the within described arrangement of the carrying rolls *e* and *e*¹, with regard to each other, for the purpose of deflecting the fabric from a vertical plane and into a series of zig-zag planes, thereby making a series of bearing points, the effect of which is to distend the fabric equally and prevent it from roping up, as set forth.

EDWARD L. PERKINS.

No. 1,057.—*Improvement in Percussion Seeders.*—I claim, first, the employment of the horizontal wheel *F*, provided with tapering flanges when said wheel has a backward and forward rotary motion imparted to it for the purpose of seeding by percussion and for lapping the grain, substantially as specified.

Second. The seed shaker and regulator *c*, in combination with the eccentric shaft *E*, when the same are used as and for the purpose specified.

Third. The use of the rod *H* and cord *a*, in combination with the shaft *E* and the flanged wheel *F*, substantially as and for the purpose herein specified

J. R. ROGERS.

No. 1,058.—Cancelled.

No. 1,059.—*Improvement in Revolving Fire Arms.*—We claim the spring bolt *k*, applied to the outer or curved part of the cylinder, in combination with the nose of the hammer, one of them being furnished with a wedge-shaped piece or projection, and the other with a spring projection, for the purpose specified.

HORACE SMITH.
DANIEL B. WESSON.

No. 1,060.—*Improved Machine for Making Horse Shoe Nails.*—First, I claim the anvil *I*, the same having both a rocking and reciprocating motion, in combination with adjustable or stationary dies, the faces of which shall be provided with a recess or groove for the purpose of preventing the pointing of the nail until its head and shank have been formed, substantially as set forth.

Second. I claim the pin *K*¹, upon which is secured permanently the anvil *I*, when the same shall be operated substantially as and for the purpose specified.

Third. I claim the mode of operating the shears or cutters, the same being made to advance at the proper moment to sever the nail from the rod and then to fall back out of the way, substantially as and for the purpose described.

Fourth. I claim the various parts which constitute the feeding apparatus, consisting of upright *5*, levers *S* and *c*, spiral spring *a*, and rod *b*, the whole being operated in the manner and for the purpose specified.

Fifth. I claim the levers *m* and *e*, acting in conjunction to hold the rod while the nail is undergoing its formation, substantially as and for the purpose specified.

Sixth. I claim the sliding frame *D*, in combination with the hammers *H H*, each being operated upon, substantially as and for the purpose described.

AMOS WHITTEMORE.

No. 1,061.—*Improved Machine for Grinding Saws.*—I claim, first, so arranging the saw supporting disk shaft *I*, the feed carriage and the gearing, that said shaft is moved laterally independently of the carriage, and simultaneously therewith the shaft and carriage move together longitudinally, substantially as and for the purposes set forth.

Second. The combination of the gauge stop *R*, and its adjusting screws with the sliding shaft *I*, and the mechanism by which it is controlled and actuated, substantially as and for the purposes set forth.

Third. The combination of a sliding bearing of the disk shaft with a double eccentric upon the disk shaft, and a friction roller upon an independent shaft, substantially as and for the purposes set forth.

Fourth. Holding the saw to the disk by means of two centre pins and an adjustable friction roller, substantially as and for the purposes set forth.

Fifth. The arrangement and combination of the set screw *U*, bearing *P* and shaft *I* of the saw supporting disk, so that the face of said disk may be adjusted parallel to or oblique to the circumference of the grindstone, substantially as and for the purposes set forth.

H. R. BURGER.

No. 1,062.—*Improved Egg Beater.*—What we claim as the invention of J. F. and E. P. Monroe is, in combination with a rotary egg beater, an arm *a*, having at one end bearings for the journals to rotate in, and at the other a clamping device for the purpose of securing the beater to the table with its shaft or bearings in a vertical line, as set forth.

Second. We claim the beaters *I* and *J*, revolved in opposite directions by suitable mechanism, substantially as set forth.

EDWIN P. MONROE,
Assignee of J. F. and E. P. Monroe.

No. 1,063.—*Improvement in Locks.*—I claim, first, a series of tumblers provided with openings or notches into which the shackle or stud of the bolt passes, in combination with a key having bits on opposite sides, by the turning of which said tumblers are moved in reverse directions to bring the notches or openings into line for receiving or liberating the shackle or stud of the bolt, as set forth.

Second. I claim a V-shaped sliding bar, and spring, combined with said reverse moving tumblers to restore them to a normal position when the key is not in action, as set forth.

THOS. L. PYE.

No. 1,064.—*Improved Needle Case and Index.*—I claim a cylindrical case constructed with cells, substantially such as described, for containing the needles, and combining therewith an index of letters or figures for designating the size of the needles, substantially as and for the purposes set forth and specified.

I also claim arranging the cover or some convenient part of said case with an index which shall designate the appropriate sizes of thread and needles to properly work together, as set forth.

CALVIN D. WHEELER.

No. 1,065.—*Improvement in Steam Boilers*.—I claim the longitudinally fluted boiler braced, as described.

I also claim, in combination with this construction of boiler, the conformable under surface of the exterior flue B¹, operating as described.

I further claim the longitudinally fluted flue, as described.

L. LEFEBVRE.

No. 1,066.—*Improvement in Door Plates*.—I claim, first, a frame or perforated plate attached to a door, in combination with a hinged plate upon which the name of the occupant of the house is depicted, and with a slot or aperture through the door to which the name plate serves as a cover, the combination being substantially such as is specified, and this combination I also claim when the hinged name plate is combined with an alarm bell, which is struck when the plate is lifted.

Second. I claim a hinged door plate and a bell pull on the outside of a door, in combination with a single bell and a single striking mechanism attached to the inside of the same door, when the whole are arranged and combined substantially in the manner specified.

JEREMY W. BLISS.

No. 1,067.—*Improvement in Harvester Rakes*.—I claim, first, in combination with a curved horizontal platform of a harvesting machine, a continually revolving raking device, the rakes of which rise and fall, and as they rotate, and as they approach the front part of the platform, descend to the level of the latter and sweep over it, raking the cut grain therefrom, and then rise at the discharge end of the platform out of the way, and move towards the front end of the same to repeat the operation, substantially as described.

Second. The construction of the raking device, shown and described, to wit: the rake arms *c c c c*, each pair being slotted at their centres and pivotted on the rotating shaft *i* to admit of the rotating and undulating or rising and falling movement of the rakes, substantially as described.

Third. In combination with the rake arms *c*, the inclined cam way or rail *f*, the latter serving as a guide for the former, as specified.

OWEN DORSEY.

No. 1,068.—*Improved Refrigerator*.—I claim, first, the insulated and cooled preserving chamber *J*, provided with an atmospheric agitator *K*, and absorbent *F*, operating substantially as and for the purposes set forth.

Second. The construction of the beam *T*, having a metallic upper portion *x*, and a water collecting trough *y*, substantially as and for the purposes explained.

Third. The insulating cover *O* of the ice reservoir, arranged and applied substantially as and for the purposes set forth.

BENJAMIN M. NYCE.

No. 1,069.—*Improvement in Apparatus for Hoisting and Storing Ice*.—We claim the method of transporting ice upon inclined planes by carrying the ice up between parallel endless chains having bars extended between said chains to hold the ice and to propel the same, the planes being pierced with openings for the passage of the ice to the successive stories of the ice house, and the propelling bars being so arranged that the descending bars shall not interfere with the free passage of ice through the openings in the plane.

We also claim the use of inclined planes for elevating ice, when each is provided with two parallel endless chains, with suitable bars between them, at proper distances apart to hold and propel the ice, when the planes are provided with spaces which can be left open when the ice is to be elevated to the height of those openings, respectively, and which can be successively closed when the ice is to be elevated to a greater height, substantially in the manner herein set forth.

We further claim the use of the hatches described to close the openings in the plane, in order to permit the ice to pass beyond a lower to an upper story of the ice house, when used in combination with two parallel endless chains, substantially as herein described and set forth.

HIRAM VAN STEENBURGH.
JOEL EGNOR.

No. 1,070.—*Improved Machine for Raising and Transporting Stones*.—I claim my improved stone carriage, or arrangement of derrick *C*, open bed frame *A*, and two separate or disconnected wheel axles or journals, substantially as specified.

I also claim the combination and arrangement of the auxiliary windlass *K*, its line *l*, pawl *h*, and ratchet *i*, or mechanical equivalents therefor, with the main windlass *I*, the crank shaft *L*, and their working gears *s t*, the whole being to enable the machine to be operated substantially as specified.

SOLOMON E. BOLLES.

No. 1,071.—*Improved Method of Governing the Action of Valve Cocks.*—I claim, first, the combination of these three elements or devices, viz., first, a variable chamber, provided with proper apertures for admission and discharge of fluid; second, two valves acting to open and close a passage through which water may flow, the one being on its seat or closing the passage when the variable chamber is of largest capacity, and the other being in a like position or performing the same office when the capacity of the chamber is smallest; and third, a proper connection between the valves and the variable chamber, so applied that the motions of the former shall be controlled by the latter, the whole three being constructed and acting in combination, substantially in the manner and for the purposes hereinbefore described, when operated upon by any competent force.

Second. I claim the combination of two valves, a variable chamber, and a connection between them all, substantially such as hereinbefore last enumerated, with a seat or platform, substantially such as is herein described, by means of a connection, substantially such as set forth, whereby the seat or platform, the valves, and the variable chamber, all act in unison, substantially as set forth.

Third. As a means of preventing concussions on pipes supplying urinals, or hopper closets, where the amount of water used is not a material consideration, and where yielding seats or platforms are employed to open a supply valve, I claim the combination, substantially as hereinbefore described, of a variable chamber, a single valve, and a yielding seat or platform with proper connections and attachments, so that the motions of the valve may be caused by the seat, and governed by the variable chamber, substantially as described.

Fourth. I claim the combination of a diaphragm, performing the duty of a stuffing box, with a valve or valves, and with a variable chamber controlling the valve or valves, the whole constructed and operating substantially as hereinbefore recited.

FREDERICK H. BARTHOLOMEW.

No. 1,072.—*Improved Method of Governing the Action of Valve Cocks.*—I claim, first, a pan provided with a proper rock shaft arm, or its equivalent.

Second. A valve or cock to open and close a passage way leading from a street main, or its equivalent, to a basin of a pan closet.

Third. A variable chamber connected with the valve, so as to control its motions in either or both directions by retarding either its opening, or closing, or both.

Fourth. A spring, or its equivalent, compressed when the valve is opened and expanding to close the valve when the pressure upon the spring is released.

Fifth. A lever so connected to the pan and to the valve as to open both when force is applied to the lever.

Sixth. A counterbalance, or its equivalent, acting to raise or shut the pan, but not operating to close the valve; intending to claim none of these parts separately, but in combination only, and when all of them are constructed and operate in combination, substantially as herein described.

FREDERICK H. BARTHOLOMEW.

No. 1,073.—*Improvement in Sewing Machines.*—I claim forming the moving feeding surface of the material cork, or its equivalent, for the purpose and in the manner substantially as described.

ROBT. M. BERRY.

No. 1,074.—*Improvement in Photographic Baths.*—I claim, first, the construction of a silver bath for photographic and ambrotype purposes made out of two plates of glass, with India rubber packing between, and fastened together between wooden or other frame work, in the manner and for the purpose substantially as specified.

Second. I claim the construction of the outer, or wooden box or case, and the manner of fastening the same together by screws S, for the purpose and in the manner as set forth.

Third. I claim the arrangement of doors or panels D D¹, in the front and back sides B and B¹, of the outer box or casing, for the purpose substantially as described.

BERNHARD HUFNAGLE.

No. 1,075.—*Improvement in Skates.*—I claim, first, a skate, composed of two sheet metal parts A a A a, cut and bent into the proper form and applied together as herein shown.

Second. The employment of the central stiffening bar D, in skates of the character above described, for the purpose herein set forth.

WILLIAM SCARLETT.

No. 1,076.—*Improvement in Harvesters.*—I claim the single head piece a, or its equivalent, as an intermediate automatically adjusting attachment for the reciprocating cutting apparatus to the carriage of harvesting machines, when combined with two or more main driving or

bearing wheels, and with the actuating gear, in such a manner as to permit of the cutting apparatus being attached at the side of the carriage of the machine, and allow it to adjust itself to the inequalities of the ground, independently of the acting gear, and other main portions of the machine, for the purposes and in the manner substantially as described.

S. W. TYLER.

No. 1,077.—*Improvement in Hemp Cutters*.—First, in combination with a cutting apparatus, extending out from the side of the main frame at about right angles to the path of motion of the machine, substantially as described, I claim the employment of the horizontal reel, supported entirely outside of or near the stubble end of the cutting apparatus, and so constructed with curved beaters or arms, or their equivalents, that it will press or hold the standing grain against the cutting apparatus, and then sweep the falling, and cut material off to the rear of the cutting apparatus, and discharge it sufficiently to one side of the machine to admit of the latter passing between the thus discharged material and the standing material to make the next cut, substantially as described.

Second. I claim, in combination with the cutting apparatus and reel, the employment of the curved guide rod *n*, arranged and operating as specified, for the purpose set forth.

Third. I claim, in combination with the cutting apparatus and the horizontal reel, combined and operating substantially as hereinbefore described, making the end of the curved reel arms to pass around in the "open space" formed by the divider, as hereinbefore described, for the purposes set forth.

WILLIAM N. WHITELY, JR.

No. 1,078.—*Improvement in Coal Stoves*.—We claim, as the invention of Henry Stanley, the manner in which he arranged and combined "as a whole" the exterior parts, consisting of a projecting plinth or base, radiating columns, cornice or abacus *E*, cornice *G*, and of two cylinders, the first, a fire cylinder *A*, having four triangular radiating flues or columns arranged, connected, and combined with the same, one at each corner of the said projecting plinth or base, each forming a communication with the air chamber *a* in said plinth or base, and with the said intermediate chambers *E* and *E*¹, in the said cornice or abacus, the second a surmounting cylinder *A*¹, having four triangular radiating flues or columns arranged, connected, and combined with the same, one at each corner of the said cornice or abacus *E*, having also the chamber *H*, and having the cornice *G* upon the top thereof, substantially as herein described and set forth.

We also claim the arrangement and combination of the said shell *x*, at or near, and with the lower end of the said fire cylinder *A*, and with the fire grate *d*, substantially as herein described and set forth.

We also claim the arrangement and combination of the conical ring *i*, having therein the grate *k*, with the intermediate chamber *E*, substantially as herein described and set forth.

We also claim the arrangement and combination of the conical ring *i*, and the solid part thereof, with the rear intermediate chamber *E*¹, substantially as herein described and set forth.

We also claim the arrangement and combination of the upper cylinder *A*¹, and the flues or columns *B*¹, and the chamber *H* connected therewith, with the cornice or abacus *E*, or its equivalent, as and for the purposes herein described and set forth.

We also claim the arrangement and combination of the chamber *H*, having therein the damper *o*, and thereto attached the exit pipe *F*, with the rear intermediate chamber *E*¹, substantially as and for the purpose herein described and set forth.

We also claim the arrangement and combination of the said shell *x*, with the opening *S* or its equivalent, to diffuse and heat the air preparatory to its entrance under and into the fire, to aid, facilitate, and promote the combustion of the fuel, and to increase the volume or quantity of heat by means thereof, as herein described and set forth.

We also claim the arrangement and combination of the cornice *G* with the flues or columns *B*¹, and with the cylinder *A*¹, substantially as herein described and set forth.

CHARLES EDDY.
JACOB SHAVOR.

No. 1,079.—*Improved Carpet Sweeper*.—I claim, first, inclining or grooving the brush shaft, as at *o* and *k*, as described, for the purposes specified, in combination with the cylinder brush for sweeping, as before described.

Second. I claim protecting the bearings from dust, by means of the plates *l*, *m*, and *n*, operating in the manner described, for the purpose specified.

Third. I claim two receptacles for receiving dust, the trough *I* and the principal dust pan, with the projecting lip, all arranged as and for the purposes specified, in combination with the cylindrical dust brush.

Fourth. I claim dividing the brush in the centre, and connecting each half with one of the driving wheels, as set forth, in combination with the method herein described of pivoting the inner ends to a suspended support, as described, whereby the continuity of the brush is not interrupted, as set forth.

HIRAM H. HERRICK.

No. 1,080.—*Lubricating Compound*.—I claim the compound made of the herein named ingredients by combining them together, substantially in the manner and in about the proportions herein set forth.

JOHN B. McMUNN.

No. 1,081.—*Improvement in the Manufacture of Flint Glass*.—I claim the substitution of oxide of zinc for the oxide of lead in the composition of ordinary flint glass, substantially in the manner and for the purpose herein fully set forth.

HORACE TRUMBULL.

No. 1,082.—*Improved Air Engine*.—I claim, first, the arrangement of the passages *e e*, relatively to the working cylinder A, regenerator chamber E, and changing cylinder B, so as to connect them at their hot ends, substantially as and for the purpose herein specified.

Second. The within described arrangement of the working cylinder A, changing cylinder B, regenerator F, and the valve or valves by which the piston *b* is made, both to change the air from the cold to the hot end of the cylinder, and to receive a fresh volume of air for the next stroke, with the advantages within set forth.

Third. Automatically regulating the temperature of the interior of the heating surfaces by the employment of the parts H and L, arranged relatively to the heating surfaces of the cylinders A and B, and to the damper *n*, or its equivalent, substantially as within described.

Fourth. Giving the regenerator an increasing area from the cold to the hot side, substantially as and for the purpose herein set forth.

Fifth. Working the single valve M, in combination with the two pistons *a* and *b*, as described, so as to thereby accomplish the threefold purpose of induction, eduction, and equilibrium valve, substantially in the manner and with the advantages herein set forth.

STEPHEN WILCOX, JR.

No. 1,083.—*Improved Air Engine*.—I claim, in air engines in which changing and working cylinders are combined, substantially as above shown, employing as heating surface a portion of both the changing and the working cylinder, substantially as and for the purposes above set forth.

STEPHEN WILCOX, JR.

No. 1,084.—*Improvement in the Manufacture of Caoutchouc*.—What is claimed as the invention of Charles Goodyear, deceased, is the new manufacture called vulcanized India rubber, which is a combination of India rubber with sulphur, (whether with or without other ingredients,) chemically altered by the application of heat, substantially as described.

CHAS. GOODYEAR.

No. 1,085.—*Improvement in the Art of Preparing Caoutchouc*.—What is claimed as the invention of Charles Goodyear, deceased, is subjecting caoutchouc, or India rubber, or other vulcanizable gums, mixed with or in the presence of sulphur, (whether with or without other ingredients,) to the action of heat, for the purpose of affecting its qualities or properties, as described.

CHAS. GOODYEAR.

No. 1,086.—*Improvement in Manufacturing Hat Bodies*.—What I claim as the invention of Henry A. Wells, in machinery forming bats of fur fibres in the manufacture of fur hat bodies, is the mode of operation, substantially as herein described, of forming bats of fur fibres of the required varying thickness from brim to tip; which mode of operation results from the combination of the rotating picking mechanism, or equivalent thereof, the pervious former and its exhausting mechanism, or the equivalent thereof, and the means for directing the fur-bearing current, or the equivalent thereof, as set forth.

I also claim the combination of the rotating picking mechanism, or the equivalent thereof, the pervious former with its exhausting mechanism, and the lower deflector, substantially as described, to regulate the deposit of the fur fibres on the lower part of the former, as described.

I also claim the combination of the rotating picking mechanism, or the equivalent thereof, the pervious former with its exhausting mechanism, and the upper deflector, substantially as described, to regulate the deposit of the fur fibres on the tip of the pervious former, as set forth.

And, finally, I claim the combination of the rotating picking mechanism, the pervious former with its exhausting mechanism, and the means described, or the equivalent thereof, for inducing a current of air to aid in carrying and giving direction to the fur, and insuring its proper deposit on the surface of the pervious former, as required, as set forth.

H. A. BURR.

No. 1,087.—*Improvement in Machinery for Making Hat Bodies.*—What I claim as the invention of Henry A. Wells, is the combined process of forming fur hat bodies by depositing fur fibres to a suitable thickness on the surface of a pervious former of the required shape, and holding them thereon by the pressure of the surrounding air as they are deposited, and then hardening or partially felting the hat so formed, and while it is held by suitable pressure on the surface of the former, to give it the required consistency to admit of removing it therefrom in a suitable condition for the after process of sizing by felting, as set forth.

H. A. BURR.

No. 1,088.—*Improvement in Machines for Grinding and Sizing Paper Pulp.*—What we claim, therefore, is our improved machine for the manufacture and sizing of pulp, that is, as constructed of a simple conical grinder and outer shell, and with pipes for the introduction of the rags and the size, and the eduction of both, arranged with reference to the axis and ends of the grinder, substantially in manner and so as to enable the grinder to operate to reduce the rags to pulp, and mix the sizing therewith, as hereinbefore explained.

We also claim the introduction of the sizing into the grinder case, and directly between the reducing surface, when employed as specified, in the grinding of pulp or material used in making paper.

JOSEPH JORDAN, JR.,
HENRY KENEY,
GRANT, WARREN & Co.

No. 1,089.—*Improvement in Steering Apparatus.*—I claim the arrangement and combination of the adjustable guide and guard rails M M, with the screw shaft, or its mechanical equivalent, and its slides, or two divisions of the nut I.

I also claim the application of the pedestals to their stanchions, by means substantially as described, for enabling the pedestals and parts supported by them to move either fore and aftwise, or up and down, under the action of the rudder, as specified.

CATHARINE MULLER HUNT.

No. 1,090.—*Improvement in Manufacture of Hard Rubber.*—I claim the use of fatty substances, formed in or derived from organic matter of vegetable origin, when incorporated with the rubber compound in the manufacture of hard vulcanized rubber, as described, for the purpose or purposes specified.

THOS. J. MAYALL.

No. 1,091.—*Improvement in Seed Planters.*—I claim, in combination with a seed planting machine that is operated by hand, the placing of both the driver and the person who operates the seed slides or valves upon the machine in such position as that each may attend to his particular duty without interfering with that of the other, substantially as described.

I also claim, in combination with a seed planting machine that is operated by hand, and upon which the driver and the person who works the seed slides or valves sit or stand, the so locating of said seats or stands as that the weight of one of the persons may be used to counterbalance or overbalance the weight of the other, for the purpose of more readily raising or lowering the seeding apparatus, substantially as and for the purpose described.

GEORGE W. BROWN

No. 1,092.—*Improvement in Seed Planters.*—I claim, in combination with a seed planting machine, operated by hand, and having its seeding device forward of the centre of the wheels and forward of the driver's seat and a hinged connection, the locating of the seat in such relation to a line drawn through the centres of the wheels or ground supports as that the occupant of said seat may, by moving himself, or throwing his weight forward or backward on his seat, without the necessity of rising, walking, or standing over or near the seeding devices, force the seeding apparatus into or raise it from the ground, substantially as described.

GEORGE W. BROWN.

No. 1,093.—*Improvement in Seed Planters.*—I claim, in combination with a seed planting machine, that has a hinged or yielding joint between its fixed points of support, and with its seeding devices between said points, the so connecting of the parts between said fixed points of support as that that portion of the machine carrying the seeding devices may be raised up out of the ground by the attendant riding on the machine, and be carried by the tongue or horses' necks and the supporting wheels, substantially as and for the purpose described.

GEORGE W. BROWN.

No. 1,094.—*Improvement in Seed Planters.*—I claim, in combination with a seed planting

machine, so made as that the forward part of the machine can be raised up on the supporting wheels and there carried, a lock, block, or stop *h*, which prevents the rear part of the frame from descending so low as to strike the ground or inconvenience the occupant of the seat upon said rear portion of the frame, substantially as and for the purpose described.

GEORGE W. BROWN.

No. 1,095.—*Improvement in Seed Planters*.—I claim so combining with a lever, by which both may be operated, a valve or slide in the seed hopper and a valve in the seed tube, as that a half motion of the lever by the operator riding on the machine, by which they are operated, shall both open and close the seed passages at regular periods, and pass measured quantities only, substantially as described.

GEORGE W. BROWN.

No. 1,096.—*Improvement in Corn Shellers*.—I claim, first, the combination and arrangement of the two shelling disks, running on the same plane in opposite directions, as herein described and for the purpose set forth.

Second. The combination of the said disks with guide spring or press plates, or their equivalents, as herein described and for the purpose set forth.

JAMES J. JOHNSTON.

No. 1,097.—*Improvement in Curing Provisions*.—What I claim is salting and curing food and hides in any latitude and at times when the temperature at the surface of the earth is too high for the ordinary process, by means of operating in excavations or shafts made in the earth to a depth sufficient to attain the mean temperature of the earth or to a depth at which meats have not heretofore been salted and cured, and further to cool by artificial refrigeration, substantially as set forth.

D. E. SOMES.

No. 1,098.—*Improvement in Projectiles*.—I claim the employment of an expansible packing surrounding the projectile and so combined therewith substantially as described, that the force of the discharge, acting on the inside of such packing, shall force it outward against the bore of the gun and into the grooves thereof if the gun be rifled, substantially as set forth.

CHARLES T. JAMES.

No. 1,099.—*Improvement in Threshing Machines*.—I claim, first, the swinging blind *G*, fitted to the throat of the machine, to operate as specified.

Second. The guard beam *x*, constructed as described, placed in front of the cylinder and arranged relatively therewith, for the purpose described.

Third. The combination of the guard board *H* and swinging blind *G*.

Fourth. The swinging blind *G*, guard board *H*, and guard beam *x*, arranged for joint operation, as set forth.

SPENCER MOORE.

No. 1,100.—*Improvement in Portable Copying Apparatus*.—I claim a scroll-shaped back or holder, constructed and operated as described, in combination with a book, substantially as described.

WILLIAM VAN ANDEN.

No. 1,101.—*Improvement in Folding Bedsteads*.—I claim determining the relative position of the head or foot guards with the side rails when the bedstead is in an unfolded position, by means of a stop or support, substantially as specified.

And I claim the pins 5, 5, inserted as set forth, in combination with the stops or supports, as specified.

JOHN B. WICKERSHAM.

No. 1,102.—*Improved Folding Bedstead*.—I claim connecting the wire or metallic work 6, 6, forming the head or foot guards, to the cross bar 2, upon which the parts turn, as set forth.

JOHN B. WICKERSHAM.

No. 1,103.—Suspended.

No. 1,104.—*Improvement in Raking Attachments to Harvesters*.—What I claim as the invention of J. A. St. John is, the use of two pitmen and a slide interposed between the main driving gear and the rake, shank or shaft, for the purpose of transmitting motion to the rake from the driving power, substantially as herein described.

D. S. MORGAN.

No. 1,105.—*Improvement in Preserve Cans.*—I claim the arrangement of the flaring flange on the lid, and a rib or ridge on, and a groove in, the neck of the jar or can, when used for holding the detached elastic band on the lid or neck of the jar or can, and also for causing the greatest pressure of the band to be directly over the joint, for the purpose of hermetically sealing it and excluding the air, as herein described and set forth.

CARLTON NEWMAN.

CLAIMS OF PATENTS FOR DESIGNS GRANTED DURING THE YEAR 1860.

No. 1,183.—*Design for a Trade Mark.*—I claim the combination of the labels of the firm with the mark of the boxes and the brand of the cork of the firm, Jules, Mumm & Co., of Reims, with my name as sole agent of said house, arranged in an artistic as well as in a new and useful manner, as herein described and fully represented in the accompanying print.

JAMES MEYER, JR.

No. 1,184.—*Design for the Doors of Cook's Stoves.*—We claim the ornamental design herein described and represented in the annexed photographic drawing for the doors or the panels of the stove.

N. S. VEDDER.
ARCHIBALD MURRAY.

No. 1,185.—*Design for the Side Plates of Box Stoves.*—We claim the ornamental design herein described and represented in the annexed photographic drawing for a stove plate or plates.

N. S. VEDDER.
EZRA RIPLEY.

No. 1,186.—*Design for the Side Plates of Stoves.*—What I claim is, the ornamental design herein described and represented in the annexed photographic drawing for stove plates.

N. S. VEDDER.

No. 1,187.—*Design for the Doors of Cook's Stoves.*—I claim the ornamental design herein described and represented in the annexed photographic drawing for the doors and panels of stoves.

N. S. VEDDER.

No. 1,188.—*Design for Stoves.*—I claim the design and configuration of the mouldings and ornaments as herein described, forming an ornamental design for stoves.

S. W. GIBBS.

No. 1,189.—*Design for Fire Dogs.*—I claim the herein described configuration and ornamentation, consisting of the oak vine A, and the base B, as a new and original ornamental design for "fire dogs."

THEODORE W. LILLAGORE.

No. 1,190.—*Design for Bedsteads.*—I claim the configuration of the head and foot boards A C, the same comprising the panels, moulding and sinuous rails, as shown and described, to form a new and original design for a bedstead.

P. C. CAMBRIDGE, JR.

No. 1,191.—*Design for a Trade Mark.*—I claim the accompanying design, to be used as a trade mark.

NAPTHALI EZEKIEL.

No. 1,192.—*Design for Back Combs.*—I claim forming the frame A of the back comb with a

string of balls C, as described, in combination with the standards *b*, and wave-like projections *a*, so as to form a new and ornamental design, in the manner herein specified.

ABEL GRAY.

No. 1,193.—*Design for Cistern Pumps*.—I claim the design or configuration described and shown, consisting of the rectangular base, cylindrical central division *b*, and open octagon top.

BIRDSILL HOLLY.

No. 1,194.—*Design for Fire Dogs*.—I claim the herein described configuration and ornamentation, consisting of the two angular open parts A and B, and the base C, as a new and original or ornamental design for "fire dogs."

THEODORE W. LILLAGORE.

No. 1,195.—*Design for Carpet Patterns*.—I claim the configuration of the design hereunto annexed, when made by being inwrought into three-ply ingrain, or other carpeting, in the form similar to the drawings accompanying this specification.

HENRY G. THOMPSON.

No. 1,196.—*Design for Carpet Patterns*.—I claim the configuration of the design hereunto annexed, when made by being inwrought into three-ply ingrain or other carpeting, in the form similar to the drawings accompanying this specification.

HENRY G. THOMPSON.

No. 1,197.—*Design for Floor Oil Cloth*.—I claim the design for floor oil cloth fully represented in the accompanying pattern.

JAMES BOGLE.

No. 1,198.—*Design for Floor Oil Cloth*.—I claim the design for floor oil cloth fully represented in the accompanying pattern.

JAMES BOGLE.

No. 1,199.—*Design for Carpet Patterns*.—I claim the design or pattern for carpets and other fabrics, herein set forth.

E. J. NEY.

No. 1,200.—*Design for a Cooking Stove*.—I claim the configurations and ornaments above described and shown in the drawings as a design for a cooking stove.

WILLIAM W. STEVENS.

No. 1,201.—*Design for Parlor and Cook's Stove*.—I claim the ornamental design of the stove plates, herein described and shown, as represented in the annexed photographic drawing.

N. S. VEDDER.

No. 1,202.—*Design for Parlor Stoves*.—I claim the ornamental design of the stove plate or plates herein specified and represented in the annexed photographic drawing.

N. S. VEDDER.

No. 1,203.—*Design for a Statuette of Stephen A. Douglas*.—I claim the design for a statuette as above described and represented in the accompanying drawings.

LEONARD W. VOLK.

No. 1,204.—*Design for a Cooking Stove*.—I claim the combination of ornamental figures and forms represented in and by the accompanying drawing, forming together an ornamental design for the plates of a cooking stove.

N. S. VEDDER.

No. 1,205.—*Design for Iron Railings*.—I claim the ornamental configuration and design of iron railing, as herein described and shown in the annexed drawing.

ISAAC DE ZOUCHE.

No. 1,206.—*Design for a Sewing Machine*.—I claim the peculiar form and figure herein described and set forth as the design for the casting of a sewing machine.

JAMES E. A. GIBBS.

No. 1,207.—*Design for Stoves.*—We claim the general design and configuration represented in the accompanying photograph.

HENRY S. HUBBELL.
THOMAS H. WOOD.
JOHN E. ROBERTS.

No. 1,208.—*Design for Stoves.*—I claim the configuration, herein shown and described, of the top, door, and frame, base and feet, to form a new and ornamental design for a stove.

WM. H. SMITH.

No. 1,209.—*Design for Carpet Patterns.*—I claim the design or pattern for carpets, herein set forth.

ELIMER J. NEY.

No. 1,210.—*Design for Carpet Patterns.*—I claim the design or pattern for carpets herein set forth.

ELIMER J. NEY.

No. 1,211.—*Design for Tops and Bases of Stoves.*—I claim the ornamental design and configuration of the top, base, and door and frame, of a sheet iron stove, as herein described and shown in the accompanying perspective drawing.

S. W. GIBBS.

No. 1,212.—*Design for the Plates of a Cooking Stove.*—I claim the ornamental configuration of the plates of a square oven cook stove, as herein described and set forth.

S. W. GIBBS.

No. 1,213.—*Design for a Copying Press.*—I claim, first, the within described form of the columns C, fishes F, and nut G, arranged as described, so as to compose a new and ornamental design for the arch of a copying press.

Second. The within described form of the lever I, consisting of a boss k, fluted from top to bottom, in combination with fluted arms l, beads m, and handles n, as described, so as to produce a new and ornamental design.

Third. The within described form of the socket J, composed of the flange o, spherical boss p, ornamented by leaves q, and surmounted by a cylindrical portion r, in the manner herein specified.

FRANCIS HOVEY.

No. 1,214.—*Design for Stove Plates.*—I claim the ornamental design and configuration of the top, sides, front, and hearth plate or damper, which in combination form a cast iron parlor stove, as described.

SAMUEL H. RANSOM.

No. 1,215.—*Design for Trade Mark for Neuralgic Pills.*—I claim the aforesaid design, consisting of picture, shown and described, in combination with the words "S. Armitage's Neuralgic Pills" and the words "a sure cure of neuralgic affections."

SAMUEL ARMITAGE.

No. 1,216.—*Design for Andirons.*—I claim the above described design for andirons, made, as set forth and illustrated, in its general configuration and component parts.

SAMUEL BOYD.

No. 1,217.—*Design for Andirons.*—I claim the above described and illustrated composition or design.

SAMUEL BOYD.

No. 1,218.—*Design for Coffins.*—I claim the form and configuration for a design for coffins, herein shown.

J. C. KARR.

No. 1,219.—*Design for Ice Pitchers.*—I claim the configuration of the projections a and beads b, as shown, to form a new and original design for an ice or refrigerating pitcher.

GEO. W. SMITH.

No. 1,220.—*Design for Fire Dogs*.—I claim the eagle pattern design for fire dogs, described and set forth.

THEODORE W. LILLAGORE.

No. 1,221.—*Design for Fire Dogs*.—I claim the rose pattern design for fire dogs, described and set forth.

THEODORE W. LILLAGORE.

No. 1,222.—*Design for Fire Dogs*.—I claim the configurations and ornamentations, arranged and combined together as herein described and set forth, as a new and original design for a fire dog.

THEODORE W. LILLAGORE.

No. 1,223.—*Design for Fire Dogs*.—I claim the configuration and ornamentations, herein described and set forth, as a new and original design for fire dogs.

THEODORE W. LILLAGORE.

No. 1,224.—*Design for Fire Dogs*.—I claim the configuration and ornamentations, herein described and set forth, as a new and original design for fire dogs.

THEODORE W. LILLAGORE.

No. 1,225.—*Design for Fire Dogs*.—I claim the configuration and ornamentations, arranged and combined together as herein set forth and described, as a new and original design for a fire dog.

THEODORE W. LILLAGORE.

No. 1,226.—*Design for Carpets*.—I claim, as my invention, the design in the annexed photographic drawings.

DAVID McNAIR.

No. 1,227.—*Design for Water Coolers*.—I claim the cylindrical body A with the configuration of the handles B, basso relievo C, base E, mouldings D a d e f g h, and cover F, all forming a new and original design for a water cooler.

CH. MÜLLER.

No. 1,228.—*Design for Carpets*.—I claim, as my invention, the design in the annexed photographic drawing.

FRANCIS I. PIERCE.

No. 1,229.—*Design for Trade Marks for Lead Pencils*.—I claim the new trade mark for labels for lead pencils, herein described, composed of the eagle, with its several appurtenances, as herein described, and of the words, "eagle pencil," combined in the manner and so to produce the distinctive trade mark herein shown and described.

JOSEPH ROSENTHAL.

No. 1,230.—*Design for Stamping on Lead Pencils*.—I claim the above ornamental design or trade mark, composed of a spread eagle and the word "eagle," combined as represented, to be fixed on pencils, as above described.

JOSEPH ROSENTHAL.

No. 1,231.—*Design for a Cooking Range*.—We claim the ornamental figures and forms represented in and by the accompanying drawing, the whole forming the front and end plates of a cooking range

JOHN MARTINO.
JAMES HORTON.

No. 1,232.—*Design for Spoon Handles. &c.*—I claim the ornamental design to be struck up or embossed upon the handles of spoons, forks, or articles of table cutlery, as described and represented in the drawing.

JOHN POLHAMUS.

No. 1,233.—*Design for Parlor Stoves*.—I claim the ornamental configuration and design of parlor stove herein described, as shown in the annexed drawings.

ISAAC DE ZOUCHE.

No. 1,234.—*Design for Floor Cloth.*—I claim the ornamental design represented in the accompanying pattern.

JEREMIAH MEYER.

No. 1,235.—*Design for Stoves.*—I claim the ornamental design and configuration for the front and side plates of a stove, as herein described and shown, by the accompanying drawings.

N. S. VEDDER.

No. 1,236.—*Design for Floor Oil Cloth.*—I claim the combination of figures and devices, herein described and represented in the accompanying drawings, to form an ornamental pattern or design for a floor oil cloth.

J. B. VIROLET.

No. 1,237.—*Design for Paint Cans.*—I claim a vessel of the cylindrical form described, whose periphery is ornamented with the plain surfaces A A¹ A¹, mouldings B B, and mouldings B¹ B¹, arranged in relation to each other, and the vessel, as set forth, as a new and original design for a paint vessel.

WASH. L. GILROY.

No. 1,238.—*Design for Paint Cans.*—I claim a vessel of the cylindrical form described, whose periphery is ornamented with the plain surfaces A, grooves B, and mouldings C, arranged in relation to each other, as set forth, as a new and original design for a paint vessel.

WASH. L. GILROY.

No. 1,239.—*Design for Paint Cans.*—I claim a vessel of the form described, and whose sides are ornamented with the grooves b b, and flat surfaces c c, as set forth, as a new and ornamental design for a paint vessel.

WASH. L. GILROY.

No. 1,240.—*Design for Paint Cans.*—I claim a vessel of the cylindrical form described, whose periphery is ornamented with the plain surfaces A, grooves B, and mouldings C, arranged in relation to each other, as set forth, as a new and original design for a paint vessel.

WASH. L. GILROY.

No. 1,241.—*Design for Spoon and Fork Handles.*—I claim the application and use of the combination and arrangement of the ornamental devives for the purpose of ornamenting the obverse or reverse sides of forks, spoons, or other articles of table cutlery, whether made of silver or other material or metal.

M. GIBNEY.

No. 1,242.—*Design for a Stove.*—We claim the ornamental design for stoves exhibited in the accompanying drawings.

JAMES GREER.

R. I. KING.

No. 1,243.—*Design for Stove Plates.*—We claim the general design and configuration represented in the accompanying photograph.

HENRY S. HUBBELL.

THOMAS H. WOOD.

No. 1,244.—*Design for Stoves.*—I claim the design for stove plates, as above described and illustrated in the accompanying drawing.

JACOB RESOR.

No. 1,245.—*Design for a Stove Plate.*—We claim the stove plate shown in the drawings, consisting of the arrangement of heads, cyma reversa, and ornamental figures therein exhibited.

JOHN SIDDONS,

JAS. C. HART.

No. 1,246.—*Design for a Parlor Stove.*—I claim the configurations and ornaments above described and shown in the drawings, as a design for a parlor stove.

WM. W. STEVENS.

No. 1,247.—*Design for a Cooking Range.*—I claim the new design for cooking range, consisting of the ornamental configurations, as herein described and represented in the drawings.
A. C. BARSTOW.

No. 1,248.—*Design for a Cook's Range.*—I claim the design for the cast metal front of the range, as formed and ornamented with rosetted panels and mouldings, or other ornamental characteristics, as shown in the said drawing.

I also claim, as part of such design, the panel formed with mouldings and the rosettes arranged on a tapering projection.

GARDNER CHILSON.

No. 1,249.—*Design for a Nut Cracker.*—I claim the bird's head A, with a feather G, projecting out from the back of the head, as represented, and for the purposes set forth.

SAMUEL J. SMITH.

No. 1,250.—*Design for a Bust of Abraham Lincoln.*—I claim the design for a bust, as above described, and represented in the accompanying print.

LEONARD W. VOLK.

No. 1,251.—*Design for a Stove.*—I claim the design and configuration of the mouldings and ornaments, as herein described, forming an ornamental design for stoves.

S. W. GIBBS.

No. 1,252.—*Design for an Ornamental Ridge for Roofs.*—I claim the ornamental design for a ridge for roofs, represented in and by the accompanying drawing.

JOHN L. JONES.

No. 1,253.—*Design for Carpet Patterns.*—What I claim is the design or pattern for carpets, or other fabrics, herein set forth.

ELIMER J. NEY.

No. 1,254.—*Design for Carpet Patterns.*—I claim the design or pattern for carpets, or other fabrics, herein set forth.

ELIMER J. NEY.

No. 1,255.—*Design for a Cook's Stove.*—I claim the above described ornamental design for stove plates.

N. S. VEDDER.

No. 1,256.—*Design for a Pump.*—What I claim, as a new design for the tops of pumps, is the form and configuration of the side plates, as shown and described, and the combined configuration of the side plates with the transverse rods, lever, and yoke, as described and shown in Fig. 1.

BIRDSILL HOLLY.

No. 1,257.—*Design for a Parlor Stove.*—I claim the ornamental design for a parlor stove, herein described and represented.

LOUIS MEYER.

No. 1,258.—*Design for Decanter Stoppers.*—I claim the forming and designing of the upper part of a decanter stopper in the shape of a fireman's cap or helmet, as set forth and described.

WILLIAM POUNTNEY.

No. 1,259.—*Design for Plates of a Cooking Stove.*—I claim the ornamental design of the plates A E N and S, of a cooking stove, as herein specified, and represented in the annexed photographs.

REUBEN H. N. BATES.

No. 1,260.—*Design for a Fire Shovel.*—I claim the design for a cast metal fire shovel, as herein above illustrated and described.

LEMUEL MORGAN.

No. 1,261.—*Design for a Fire Shovel.*—I claim a new pattern for a fire, coal, or ash shovel, having the shape and configuration illustrated and described.

LEMUEL MORGAN.

No. 1,262.—*Design for a Fire Shovel*.—I claim the form and configuration of a pattern or design for fire, coal, or ash shovel, as described and represented.

LEMUEL MORGAN.

No. 1,263.—*Design for a Fire Shovel*.—I claim a new plain pattern fire shovel having a handle shank enlargement, configuration as illustrated and described.

LEMUEL MORGAN.

No. 1,264.—*Design for a Carpet Pattern*.—I claim the configuration of the design hereunto annexed, when made by being inwrought into three-ply ingrain, or other carpeting, in the form similar to the drawings accompanying this specification.

HENRY G. THOMPSON.

No. 1,265.—*Design for a Carpet Pattern*.—I claim the configuration of the design hereunto annexed, when made by being inwrought into three-ply ingrain, or other carpeting, in the form similar to the drawings accompanying this specification.

HENRY G. THOMPSON.

No. 1,266.—*Design for a Carpet Pattern*.—I claim the configuration of the design hereunto annexed, when made by being inwrought into three-ply ingrain, or other carpeting, in the form similar to the drawings accompanying this specification.

HENRY G. THOMPSON.

No. 1,267.—*Design for a Carpet Pattern*.—I claim the configuration of the design hereunto annexed, when made by being inwrought into three-ply ingrain, or other carpeting, in the form similar to the drawings accompanying this specification.

HENRY G. THOMPSON.

No. 1,268.—*Design for a Carpet Pattern*.—I claim the configuration of the design hereunto annexed, when made by being inwrought into three-ply ingrain, or other carpeting, in the form similar to the drawings accompanying this specification.

HENRY G. THOMPSON.

No. 1,269.—*Design for a Carpet Pattern*.—I claim the configuration of the design hereunto annexed, when made by being inwrought into three-ply ingrain, or other carpeting, in the form similar to the drawings accompanying this specification.

HENRY G. THOMPSON.

No. 1,270.—*Design for a Carpet Pattern*.—I claim the configuration of the design hereunto annexed, when made by being inwrought into three-ply ingrain, or other carpeting, in the form similar to the drawings accompanying this specification.

HENRY G. THOMPSON.

No. 1,271.—*Design for a Carpet Pattern*.—I claim the configuration of the design hereunto annexed, when made by being inwrought into three-ply ingrain, or other carpeting, in the form similar to the drawings accompanying this specification.

HENRY G. THOMPSON.

No. 1,272.—*Design for a Carpet Pattern*.—I claim the configuration of the design hereunto annexed, when made by being inwrought into two-ply ingrain, or other carpeting, in the form similar to the drawings accompanying this specification.

HENRY G. THOMPSON.

No. 1,273.—*Design for a Carpet Pattern*.—I claim the configuration of the design hereunto annexed, when made by being inwrought into two-ply ingrain, or other carpeting in the form similar to the drawings accompanying this specification.

HENRY G. THOMPSON.

No. 1,274.—*Design for a Carpet Pattern*.—I claim the configuration of the design hereunto annexed, when made by being inwrought into two-ply ingrain or other carpeting, in the form similar to the drawings accompanying this specification.

HENRY G. THOMPSON.

No. 1,275.—*Design for a Carpet Pattern*.—I claim the configuration of the design hereunto

annexed, when made by being inwrought into two-ply iagrain, or other carpeting, in the form similar to the drawing accompanying this specification.

HENRY G. THOMPSON.

No. 1,276.—*Design for Spoon Handles*.—I claim the said design for the purpose set forth.

HENRY C. FOSTER.

No. 1,277.—*Design for a Cooking Stove*.—I claim the combination and arrangement of ornamental figures and forms represented on the accompanying drawings, forming together the ornamental design of a cooking stove.

S. H. RANSOM.

No. 1,278.—*Design for a Parlor Stove*.—I claim the combination and arrangement of ornamental figures and forms represented on the accompanying drawings, forming together the ornamental design for a parlor or heating stove.

S. H. RANSOM.

No. 1,279.—*Design for a Cooking Stove*.—I claim the combination and arrangement of ornamental figures and forms represented on the accompanying drawings, forming together the ornamental design for a cooking stove.

S. H. RANSOM.

No. 1,280.—*Design for a Stove*.—I claim the ornamental configuration and design of box heating stoves, herein described and shown, in the annexed drawings.

ISAAC DE ZOUCHE.

No. 1,281.—*Design for a Cooking Stove*.—We claim, first, the ornamentations *e f g*, on each of the two side plates A, the name "Continental" being in letters surrounded by the bead *g*, as described.

Second. We claim the ornamentations *h*, on the door B, and the ornamentations *i*, on the door B¹, of both the right and left sides of the stoves, as described.

Third. We claim the ornamentation *l*, on each of the front doors D.

Fourth. We claim the ornamentations *k k*, on the front plate C, and also the form of the projecting damper *k*¹, on the same, as shown in the figure.

Fifth. We claim the moulding *o*, around the top plate M.

Sixth. We also claim the moulding *p*, around the bottom plate N, all as and for the purpose herein set forth and specified.

GARRETTSON SMITH.
HENRY BROWN.

No. 1,282.—*Design for a Cooking Stove*.—We claim, first, the ornamentations *e f g*, on each of the two side plates A, as described.

Second. We claim the ornamentation *h*, on each of the two side doors B, as described.

Third. We claim the ornamentation *i*¹, the letters forming the name "Herald," and the projecting form of the damper *i*¹, respectively, on the front plate C, as described.

Fourth. We claim the moulding *k*, on the two front doors D.

Fifth. We claim the moulding *n*, around the top plate L; and

Sixth. We also claim the moulding *o*, around the bottom plate M, all as and for the purpose set forth and specified.

GARRETTSON SMITH.
HENRY BROWN.

No. 1,283.—*Design for a Cook's Stove*.—We claim the ornamental figures and forms represented in and by the accompanying drawing, the whole forming an ornamental design for plates of a cooking stove.

G. SMITH.
H. BROWN.

No. 1,284.—*Design for a Cook's Stove*.—We claim the ornamental figures and forms represented in and by the accompanying drawing, the whole forming plates for an ornamental cooking stove.

G. SMITH.
H. BROWN.

No. 1,285.—*Design for a Cook's Stove*.—We claim the ornamental figures and forms represented in and by the accompanying drawing, the whole forming door plates for the Express cooking stove.

G. SMITH.
H. BROWN.

No. 1,286.—*Design for a Cook's Stove.*—We claim the ornamental figures and forms on the front and side plates and doors, as represented in and by the accompanying drawing, the whole forming an ornamental design for plates of a cooking stove.

G. SMITH.
H. BROWN.

No. 1,287.—*Design for a Gridiron.*—I claim the plain ornamental design or pattern herein described and represented in the accompanying photographic view for a gridiron.

ELNATHAN PECK.

No. 1,288.—*Design for the Plates of a Cook's Stove.*—We claim the ornamental figures and forms represented in and by the accompanying drawing, the whole forming an ornamental design for the plates of a cooking stove.

G. SMITH.
H. BROWN.

No. 1,289.—*Design for a Cook's Stove.*—I claim the ornamental arrangement of the figures on the plates of a cooking stove as herein described and represented in the accompanying drawings.

WALTER W. STANARD.

No. 1,290.—*Design for a Six Plate Stove.*—I claim the ornamental design of the top plate, side plate, and door of a six plate stove, as herein described and represented in the annexed drawings.

DAVID HATHAWAY.

No. 1,291.—*Design for a Coal Stove.*—I claim the ornamental design of stove plates herein described and represented in the annexed drawings.

DAVID HATHAWAY

No. 1,292.—*Design for a Trade Mark.*—I claim the above picture or design to be used as a trade mark upon any medicine or other article which I may manufacture.

D. L. MEINEKE.

No. 1,293.—*Design for Hub Bands.*—I claim a hub band made of taper form from its inner to its outer end, by means of the step-like declivities *a b*, the same forming a new and original design for the article specified.

BENJAMIN S. PARDEE.

No. 1,294.—*Design for a Cook's Stove.*—I claim the above described design upon a panel of a stove plate.

N. S. VEDDER.

No. 1,295.—*Design for a Cooking Range.*—We claim the ornamenting of the front plates of a cooking range, in the manner above described.

A. K. SANDERS.
N. S. VEDDER.

No. 1,296.—*Design for a Cook's Stove.*—I claim the ornamental figures and mouldings upon the plates of the stove, formed and arranged in relation to each other as herein described and shown in the accompanying drawings.

WALTER W. STANARD.

No. 1,297.—*Design for a Parlor Stove.*—I claim the ornamental design for a parlor stove herein described.

WALTER W. STANARD.

No. 1,298.—*Design for a Cook's Stove.*—I claim the ornamental design for cooking stoves herein described.

WALTER W. STANARD.

No. 1,299.—*Design for Carpet Patterns.*—I claim the design or pattern for carpets and other fabrics herein set forth.

E. J. NEY.

No. 1,300.—*Design for Carpet Patterns*.—I claim the design or pattern for carpets and other fabrics herein set forth.

E. J. NEY.

No. 1,301.—*Design for Carpet Patterns*.—I claim the design or pattern for carpets or other fabrics herein set forth.

E. J. NEY.

No. 1,302.—*Design for Carpet Patterns*.—I claim the configuration of the design hereunto annexed, when made by being inwrought into three-ply ingrain, or other carpeting, in the form similar to the drawings accompanying this specification.

HENRY G. THOMPSON.

No. 1,303.—*Design for Carpet Patterns*.—I claim the configuration of the design hereunto annexed, when made by being inwrought into three ply ingrain, or other carpeting, in the form similar to the drawings accompanying this specification.

HENRY G. THOMPSON.

No. 1,304.—*Design for Carpet Patterns*.—I claim the configuration of the design hereunto annexed, when made by being inwrought into three-ply ingrain, or other carpeting, in the form similar to the drawings accompanying this specification.

HENRY G. THOMPSON.

No. 1,305.—*Design for Carpet Patterns*.—I claim the configuration of the design hereunto annexed, when made by being inwrought into three-ply ingrain, or other carpeting, in the form similar to the drawings accompanying this specification.

HENRY G. THOMPSON.

No. 1,306.—*Design for Carpet Patterns*.—I claim the configuration of the design hereunto annexed, when made by being inwrought into three-ply ingrain, or other carpeting, in the form similar to the drawings accompanying this specification.

HENRY G. THOMPSON.

No. 1,307.—*Design for Carpet Patterns*.—I claim the configuration of the design hereunto annexed, when made by being inwrought into two-ply ingrain, or other carpeting, in the form similar to the drawings accompanying this specification.

HENRY G. THOMPSON.

No. 1,308.—*Design for Carpet Patterns*.—I claim the configuration of the design hereunto annexed, when made by being inwrought into two-ply ingrain, or other carpeting, in the form similar to the drawings accompanying this specification.

HENRY G. THOMPSON.

No. 1,309.—*Design for Carpet Patterns*.—I claim the configuration of the design hereunto annexed, when made by being inwrought into two-ply ingrain, or other carpeting, in the form similar to the drawings accompanying this specification.

HENRY G. THOMPSON.

No. 1,310.—*Design for Coffins*.—I claim the configuration and form of the within represented coffin.

J. D. CUNNINGHAM.

No. 1,311.—*Design for a Medallion for Washington Irving*.—I claim a medallion alto-relievo likeness of said Washington Irving, as designed and formed in the description herein contained.

M. L. LIVINGSTON.

No. 1,312.—*Design for Stoves*.—I claim the design and configuration of the mouldings and ornaments, as herein described, forming an ornamental design for stoves.

N. S. VEDDER.

No. 1,313.—*Design for Sad Irons*.—I claim the shape and configuration of the sad iron represented in and by the accompanying drawing.

THOMAS LORING.

No. 1,314.—*Design for the Plates of a Stove.*—We claim the combination of ornamental figures and forms represented in and by the accompanying drawing, forming together an ornamental design for the body, base, and bottom plate of a stove.

JAMES HORTON.
JOHN MARTINO.

No. 1,315.—*Design for the Plates of a Cylinder Stove.*—We claim the combination of ornamental figures and forms represented in and by the accompanying drawing, forming together an ornamental design for the plates of a cylinder stove.

JAMES HORTON.
JOHN MARTINO.

No. 1,316.—*Design for Cook's Stoves.*—I claim the ornamental design for a cooking stove herein described and represented in the accompanying photographic drawings.

WALTER W. STANARD.

No. 1,317.—*Design for Cook's Stoves.*—I claim the ornamental design for a cooking stove herein described and represented in the accompanying photographic drawings.

WALTER W. STANARD.

No. 1,318.—*Design for Centre Pieces.*—I claim the design in centre pieces for the decoration of ceilings, substantially as described.

HENRY BERGER.

No. 1,319.—*Design for a Lady's Hat.*—I claim the above described form or design for a knit or crocheted hat, the same being constructed of Berlin or Shetland worsted of any suitable material capable of being knit into the form above described and as shown more particularly by the drawings.

ELIZA A. MURDOCK.

No. 1,320.—*Design for Spoons.*—I claim the general configuration as herein shown and described, to form a new and original design for table and tea spoons.

ALONZO HEBBARD

No. 1,321.—*Design for Carpets.*—I claim the design or pattern for carpets or other fabrics herein set forth.

E. J. NEY.

No. 1,322.—*Design for Stoves.*—We claim the design and configuration of the mouldings and ornaments as herein described, forming an ornamental design for stoves.

GARRETTSON SMITH.
HENRY BROWN.

No. 1,323.—*Design for the Plates of a Cook's Stove.*—We claim the ornamental figures and forms represented in and by the accompanying drawing, the whole forming an ornamental design for the plates of a cooking stove.

GARRETTSON SMITH.
HENRY BROWN.

No. 1,324.—*Design for Carpeting, &c.*—I claim the configuration of the design hereunto annexed, when made by being inwrought into three-ply ingrain or other carpeting, in the form similar to the drawings accompanying this specification.

HENRY G. THOMPSON.

No. 1,325.—*Design for Carpeting, &c.*—I claim the configuration of the design hereunto annexed, when made by being inwrought into three-ply ingrain or other carpeting, in the form similar to the drawings accompanying this specification.

HENRY G. THOMPSON.

No. 1,326.—*Design for Carpeting, &c.*—I claim the configuration of the design hereunto annexed, when made by being inwrought into three-ply ingrain or other carpeting, in the form similar to the drawings accompanying this specification.

HENRY G. THOMPSON.

No. 1,327.—*Design for Carpeting, &c.*—I claim the configuration of the design hereunto

annexed, when made by being inwrought into two-ply ingrain or other carpeting, in the form similar to the drawings accompanying this specification.

HENRY G. THOMPSON

No. 1,328.—*Design for Carpeting, &c.*—I claim the configuration of the design hereunto annexed, when made by being inwrought into three-ply ingrain, or other carpeting in the form similar to the drawings accompanying this specification.

HENRY G. THOMPSON.

No. 1,329.—*Design for Carpeting, &c.*—I claim the configuration of the design hereunto annexed, when made by being inwrought into two-ply ingrain, or other carpeting, in the form similar to the drawings accompanying this specification.

HENRY G. THOMPSON.

No. 1,330.—*Design for Carpeting, &c.*—I claim the configuration of the design hereunto annexed, when made by being inwrought into two-ply ingrain, or other carpeting, in the form similar to the drawings accompanying this specification.

HENRY G. THOMPSON

No. 1,331.—*Design for Carpeting, &c.*—I claim the configuration of the design hereunto annexed, when made by being inwrought into two-ply ingrain, or other carpeting, in the form similar to the drawings accompanying this specification.

HENRY G. THOMPSON

No. 1,332.—*Design for Carpeting, &c.*—I claim the configuration of the design hereunto annexed, when made by being inwrought into two-ply ingrain, or other carpeting, in the form similar to the drawings accompanying this specification.

HENRY G. THOMPSON

No. 1,333.—*Design for Carpeting, &c.*—I claim the configuration of the design hereunto annexed, when made by being inwrought into two-ply ingrain, or other carpeting, in the form similar to the drawings accompanying this specification.

HENRY G. THOMPSON

No. 1,334.—*Design for Carpeting, &c.*—I claim the configuration of the design hereunto annexed, when made by being inwrought into two-ply ingrain, or other carpeting, in the form similar to the drawings accompanying this specification.

HENRY G. THOMPSON.

No. 1,335.—*Design for Carpeting, &c.*—I claim the configuration of the design hereunto annexed, when made by being inwrought into two-ply ingrain, or other carpeting, in the form similar to the drawings accompanying this specification.

HENRY G. THOMPSON.

No. 1,336.—*Design for Stove Registers.*—I claim the general design and configuration of said stove register.

N. S. VEDDER.

No. 1,337.—*Design for Stoves.*—We claim the design and configuration of the mouldings and ornaments as herein described, forming an ornamental design for stoves.

S. H. SAILOR.

JACOB STEFFE.

No. 1,338.—*Design for Heater Fronts.*—I claim the combination and arrangement of the various architectural mouldings, so as to produce, by their combined artistical effect and their relative positions, the design for heater fronts, hereinbefore set forth.

ELIAS TOMPKINS.

No. 1,339.—*Design for Parlor Cooking Stoves.*—I claim the ornamental design for parlor cooking stoves, herein described and represented by the annexed photographic drawings.

N. S. VEDDER.

No. 1,340.—*Design for a Medallion Likeness of Theodore Parker.*—I claim the above described likeness in relief of the Reverend Theodore Parker.

THOMAS A. CAREW.

No. 1,341.—*Design for Stove Doors*.—I claim the arrangement of ornamental figure and form represented in the accompanying drawings, forming the ornamental design for the doors of a cook stove.

J. D. MARSHBANK.

No. 1, 342.—*Design for the Handles of Spoons, Forks, &c.*—I claim the ornamental design to be struck up or embossed upon the handles of spoons, forks, or other articles of table cutlery, as represented in the drawing and set forth herein.

JOHN POLHAMUS.

No. 1,343.—*Design for Tea Service*.—I claim the design as above explained, and as represented in the accompanying drawing.

H. G. REED.

No. 1,344.—*Design for Stoves*.—We claim the ornamental figures and forms on the plates A B C D E F G and H, as represented in and by the accompanying drawing, the whole forming an ornamental design for a stove.

J. STEFFE.
S. H. SAILOR.

No. 1,345.—*Design for Drawer Pull*.—We claim the ornamental design and configuration of the drawer pull herein shown and described.

PURMOT BRADFORD.
J. B. SARGENT.

No. 1,346.—*Design for Cook's Stove Plates*.—I claim the above described ornamental design for cooking-stove plates.

N. S. VEDDER.

No. 1,347.—*Design for Stoves*.—I claim the combination and arrangement of figures, forms, and mouldings, herein specified and represented in the annexed drawings, forming the ornamental design of the plates and castings of a cooking-stove.

ZEBULON HUNT.

No. 1,348.—*Design for the Doors of Cooking Stove*.—I claim the configuration and arrangement of said ornament, as herein designated and represented.

CHARLES J. WOOLSON.

No. 1,349.—*Design for Stove Plates*.—I claim the configuration and arrangement of said ornaments, as herein designated and represented.

CHARLES J. WOOLSON.

No. 1,350.—*Design for Stoves*.—I claim the ornamental configuration and design of cylinder heating stove, herein described and shown in the annexed drawings.

ISAAC DE ZOUCHE.

No. 1,351.—*Design for Floor Cloths*.—I claim the ornamental design represented in the accompanying pattern.

CHAS. T. MEYER.

No. 1,352.—*Design for Iron Shutters*.—I claim the design or configuration of the rolling iron shutter, substantially as herein described and represented.

E. H. BROWN.

No. 1,353.—*Design for Carpet*.—I claim the design or pattern for carpets, or other fabrics, herein set forth.

E. J. NEY.

No. 1,354.—*Design for Carpet*.—I claim the design or pattern for carpets, or other fabrics, herein set forth.

E. J. NEY.

No. 1,355.—*Design for Carpet*.—I claim the design or pattern for carpets, or other fabrics, herein set forth.

E. J. NEY.

No. 1,356.—*Design for Carpet.*—I claim the design or pattern for carpets, or other fabrics herein set forth.

E. J. NEY.

No. 1,357.—*Design for Carpet.*—I claim the design or pattern for carpets, or other fabrics herein set forth.

E. J. NEY.

No. 1,358.—*Design for Carpet.*—I claim the design or pattern for carpets, or other fabrics, herein set forth.

E. J. NEY.

No. 1,359.—*Design for Carpet.*—I claim the design or pattern for carpets, or other fabrics, herein set forth.

E. J. NEY.

No. 1,360.—*Design for Carpet.*—I claim the design or pattern for carpets, or other fabrics, herein set forth.

E. J. NEY.

No. 1,361.—*Design for Carpet.*—I claim the design or pattern for carpets, or other fabrics, herein set forth. I also claim the particular form of the small work shown in figures A B 1 and 2, in the drawings.

E. J. NEY.

No. 1,362.—*Design for Stoves.*—We claim, first, the ornamentations 1 and 2 on the side and rear plates, as seen in plate A, as set forth and specified.

Second. We claim the moulding on each of the four edges of plate B, the same being ornamented with the beads 3, as seen in the figure, and also the figures *o* on the upper side of the plate B.

Third. We claim the ornamented moulding 4 on the front edge of the plate C, and also the ornamented moulding on the side and rear edges of the said plate C, as shown at 6 and 7.

GARRETTSON SMITH,
HENRY BROWN.

No. 1,363.—*Design for Cooking Stoves.*—I claim the combination of ornamental figures and forms represented in and by the accompanying drawing, the whole forming plates for a cooking stove.

JACOB STEFFE.

No. 1,364.—*Design for Stove Plates.*—We claim the ornamental design for box stove plates, herein described.

N. S. VEDDER,
EZRA RIPLEY.

No. 1,365.—*Design for Stove Plates.*—We claim the ornamental design for parlor stove plates, herein described.

N. S. VEDDER,
WM. L. SANDERSON.

CLAIMS OF ADDITIONAL IMPROVEMENTS GRANTED DURING THE YEAR 1860.

No. 261, to original Letters Patent No. 20,545.—*Improvement in Operating Churns.*—I claim, in combination with the rotating tread wheel A, the vertical pins *a*, vibrating levers *b b*, and connecting rods *d d*, arranged and operating with the rock shaft which drives the churn dashers, as specified.

ADDISON G. BRUSH.

No. 262, to original Letters Patent No. 24,055.—*Improved Water Wheel.*—I claim the application of the three-cornered piece within the scroll case, constructed as described for the purposes set forth.

SYLVANUS RICHARDSON.

No. 263, to original Letters Patent No. 22,126.—*Improvement in Furnaces for Evaporating Sugar Juices.*—I claim the cylindrical flue enclosing the kettle, connected to the exit flue, and communicating with the undulating flue at top, by graduated draft channels, substantially as set forth.

L. LEFEBVRE.

No. 264, to original Letters Patent No. 25,277.—*Improvement in Gelatinizing Oils.*—I claim the jellification of cod liver oil by means of the process hereinbefore described.

E. QUERU.

No. 265, to original Letters Patent No. 11,419; reissue No. 806.—*Improvement in Revolving Fire Arms.*—I claim, first, the combination of the cam *i* on the hammer, and cam *i*¹ on the trigger, constructed and arranged substantially as described for the purpose of drawing back the trigger and retaining it and the hammer at the point of full cock, without the use of any pawl or catch to retain them in that position.

Second. The use in fire arms, cocking as well by hammer as by trigger, of a pawl, in combination with a notch on the front edge of the hammer, for the purpose of preventing the complete fall of the hammer and the discharge of the piece in case of the partial raising of the hammer or drawing of the trigger, substantially as described.

Third. The combination and arrangement of the cam *i*¹ and pawl *n* on the trigger, and the cam *i* on the hammer, and stud *r* and lifter *z* in the trigger, so that their conjoined action will effect the entire operation of the arm, viz: in half cocking or full cocking the hammer, and rotating the breech into position, locking it, and setting the trigger in a drawn position preparatory to the discharge by the manipulation of either the hammer or the trigger.

Fourth. The spring stop on the arbor or spindle, and ratchet grooves in the bore of the cylinder in which it works, to prevent the backward rotation of the breech, in combination with the spring stop on the hammer spring and ratchet grooves on the external circumference of the breech in which it works to prevent the forward rotation of the breech for the purpose, by their combined action, of perfectly locking the breech in position before the hammer reaches the point of full cock by either mode of manipulation preparatory to firing.

Fifth. The lever and spiral spring in the trigger, combined and arranged as described, for the purpose of operating the vibrating stud.

JOSIAH ELLS.

No. 266, to original Letters Patent No. 26,341.—*Improvement in Skate Fastenings.*—I claim the employment or use of a lateral screw or bolt *o*¹, (Fig. No. 1,) running horizontally through a horizontal socket *o*, (Fig. No. 3,) the upright bolt *c*¹, (Fig. C, No. 2,) and socket *a*, (Fig. No. 1,) arranged as shown in the manner and for the purposes set forth; and a plug or bolt *c*, (Fig. No. 5,) to be put in socket *a*, (Fig. No. 1,) after the runner is removed and fastened therein, for the purposes set forth as described.

THOMAS P. CASTELLO.

No. 267, to original Letters Patent No. 18,705.—*Improvement in Pump Packings*.—I claim employing the piece G¹, in combination with the packing leather and with a groove or recess in the bridge D, to hold the valves E in place, and form a packing for the oscillating shaft B, substantially in the manner and for the purposes set forth.

WASHBURN RACE.

No. 268, to original Letters Patent No. 24,079.—*Improved Machine for Sawing Staves from the Bolt*.—I claim the employment and use of the rotating block carriage, as described, in combination with the saw H, as shown and for the purposes set forth in the specification.

HARRY EVARTS.

No. 269, to original Letters Patent No. 19,144.—*Improvement in Seeding Machines*.—I claim the arrangement of the stop bar N, shares C, spout tube E, slides *d d*, levers F G I, rock shaft H, scrapers M, and rollers B, as and for the purposes herein set forth and described.

JOHN HUSTON.

No. 270, to original Letters Patent No. 24,708; reissue No. 925.—*Improvement in Mode of Staying Piles for Wharves, Piers, &c.*—I claim, first, the mode set forth of bracing the rear piles of a system of piling by the use of the shoes and rods, constructed and operating substantially in the manner described.

Second. The flat plate A placed around the foot of each front pile, as and for the purpose specified.

Third. Preventing abrasion in sandy and shifting bottoms by the use of canvas, or its equivalent, applied to the bottom and protected by flexible metallic sheathing, substantially as set forth.

E. H. ANGAMAR.

No. 271, to original Letters Patent No. 25,725.—*Improvement in Spring Back Carriage Seats*.—We claim the upright spring blades *c c*, supporting the lazy back B, the arm rest springs D D, when combined and arranged substantially in the manner and for the purposes set forth.

A. HULBERT.

N. COWLES.

No. 272, to original Letters Patent No. 21,056.—*Improved Governor for Steam Engines*.—I claim the change from a disk revolving on an extended arm, to a disk revolving over the centre of the moving frame, and the consequent change in the mode of generating and applying the resultant force which arises from the combined movements of the disk and frame; which change in the mode of production and application of the power, brings the machine within a smaller compass, gives it more simplicity of construction, renders it safe to increase the velocity of its movements, and thus increase its sensitiveness and power, and especially it renders the attraction of gravitation inoperative, so that it does not at all act as a disturbing power.

ALBAN ANDERSON.

No. 273, to original Letters Patent No. 21,903.—*Improved Washing Machine*.—I claim the brake bar with the double ridged upper surface as described, in combination with hollowed bearings *a b*, and annular slotted bearings pieces *c*, lever and rod, arranged and operating with the roller A and apron D, as hereinbefore set forth.

J. F. POND.

No. 274, to original Letters Patent No. 24,794.—*Improved Canal Boat Propeller*.—I claim the arrangement of the shaft F to the bed plate R, being made detachable by means of the strap J, so that the apparatus as described in patent to which this is an additional improvement, with the exception of the bed plate, may be taken out or put in its place without docking the boat.

ROBERT CARTWRIGHT.

No. 275, to original Letters Patent No. 13,506.—*Improvement in Ship's Windlasses*.—I claim, first, the ratchets N and O, when made substantially as described and shown by the drawings, for the purpose of controlling the gears L and M of my windlass.

Second. I claim combining the lever and screw for working the friction bands on my windlass, for the purpose and in the manner described.

JAMES EMERSON.

No. 276, to original Letters Patent No. 26,229.—*Improvement in Coffee Pots*.—I claim the

special arrangement of the inclined planes, or sections of screws H and K, the bail E, and the filtering cup, for the purpose specified.

H. P. GATCHELL.

No. 277, to original Letters Patent No. 19,360.—*Improvement in Cutters for Harvesters.*—I claim the combination of the removable cutters b^1 with bar d and intermediate teeth d^1 , the two latter formed of the same piece, all the parts being arranged and connected together in the manner and for the purposes specified.

JOHN GORE.

No. 278, to original Letters Patent No. 13,039.—*Improvements in Revolving Fire Arms.*—I claim the application to cylinders having their cones placed within cells, or to cylinders so fitted as to require their being capped from the rear of a guard constructed of a ring of metal, closed at its end by a disk having appropriate openings for the access of the hammer to each cone, and with a door giving access to the cone cells, the guard being fitted to move independently of the cylinder, or in connection with it as required, substantially in the manner and for the purposes set forth in the above specification.

F. D. NEWBURY.

No. 279, to original Letters Patent No. 19,292.—*Improved Machine for Cutting Tenons on Spokes.*—I claim operating the carrier B and bearer C upon the face plate A, by means of the eccentrics f and g , the same being constructed and arranged together substantially in the manner and for the purpose specified.

I also claim adjustably securing the cutter pieces D D by means of the nutted T-bolt E, when the same are arranged and applied together in relation to each other and the carrier B, in the manner described and set forth.

MAHLON GREGG.

No. 280, to original Letters Patent No. 20,356.—*Improved Protractor.*—First, I claim the arrangement of the several verniers, limbs, scales, and rule, in one instrument, in the manner described for the purposes set forth.

Second. I also claim the peculiar arrangement of the sliding vernier scale plate, by which it can be applied with equal readiness and facility to either side of the rule, so as to read the given angle and its complement in connection with the given distance, or be used separately, as the case may require.

Third. I claim as an improvement the arrangement set forth for adjusting the several verniers of the scale plate to their corresponding scales.

JOSIAH LYMAN.

No. 281, to original Letters Patent No. 24,754.—*Improved Washing Machine.*—I claim the arrangement described of the bars 1, 2, 3, and 4, and the springs 6, in the manner described, by which I am enabled to secure particular parts of the clothing with greater facility in such a manner as to concentrate the action of the rubber upon them, while at the same time the rubbing bar, which forms a part of this arrangement, is allowed to so yield by the compression of the springs as to protect fine fabrics and delicate articles from injury, as set forth.

CHARITY PENDLETON.

No. 282, to original Letters Patent No. 28,163.—*Improved Machinery for Crushing Quartz, &c.*—I claim a stamper, or stampers working in a mortar made on the top of a stationary cone by a hollow revolving cone working on and projecting above the top of the said stationary cone, with the pulverizing surfaces made by the said cones coming in contact with each other, in combination with the projections ll , made on the base of the said revolving cone working in and on the side of one or more channels made on the base of the said stationary cone, for the purpose of crushing, grinding, and pulverizing quartz rock and earth containing gold, and forcing the said pulverized rock and earth into the bottoms of the said channels in contact with the quicksilver, for the purpose of securing the gold.

JULIUS C. DICKEY.

No. 283, to original Letters Patent No. 26,540.—*Improvement in Attaching Skates to Boots.* I claim the male and female vertical dovetail portions, substantially as herein described and represented, whereby the heel portion of the skate iron will be secured against lateral or longitudinal movement independent of the front attachment.

THOMAS S. WHITMAN.

No. 284, to original Letters Patent No. 25,624.—*Improvement in Apparatus for Laying Drain Tile.*—I claim the herein described ball B, the double acting clutches or fingers F F, with its

notched slide *g*, and lock attachment *H*, the mole attachments as in Fig. 2, when used in combination with the rope *R*, or its equivalent.

B. B. BRIGGS.

No. 285, to original Letters Patent No. 27,223.—*Improved Steering Apparatus*.—I claim the arrangement and combination of parts herein described, the same consisting in placing the thwartship screw *H* directly above the rudder post, and operating it by means of a bevel wheel fixed at its middle and gearing into a similar wheel on the after end of the shaft of the steering wheel, all substantially as set forth and shown.

DANIEL JONES.

No. 286, to original Letters Patent No. 25,767.—*Improvement in Cutting and Panning Cakes*. I claim the scrap clearer *B*, the annular jumble cutters *C*, and the bottoms *A* and *A*¹, substantially as and for the purposes specified.

JOHN H. SHROTE.

No. 287, to original Letters Patent No. 27,261.—*Improvement in Moulding Machines*.—I claim the circular guide or rest *O*, and the spring *Z*, when constructed as and used for the purposes substantially as set forth.

ELISHA M. SMITH.

No. 288, to original Letters Patent No. 25,352.—*Improvement in Grates*.—I claim the combination of the adjustable back *E*, with the stationary back *B*, when they are arranged with reference to each other, and with the flue *T* behind them and under the grate, in the manner shown and described.

JOSEPH TIBERI.

No. 289, to original Letters Patent No. 22,913.—*Improved Instrument for Taking Altitudes of the Sun*.—I claim the arrangement of the cylinder *F*, with the spirally curved lines drawn upon it, and the bar *P*, with the hour lines drawn upon it, in such relation to each other, and the limb *H*, and the declination arc *J*, and limb *K*, and plates *f f f f*, and the solar lenses in said plates, that it operates substantially as and for the purposes specified.

FREDERICK YEISER.

No. 290, to original Letters Patent No. 25,326.—*Improved Machine for Cutting and Finishing Shoe Heels*.—I claim the combination of the former *U*, the rod *V*, plates *W*, arms and pins *X*, lever *Y*, and eccentric *Z*, acting as hereinbefore substantially set forth, for adjusting the boot and shoe in machine for shaping, cutting, and finishing heels after they are fastened to the shoe.

WM. F. EDSON.

No. 291, to original Letters Patent No. 24,657.—*Improvement in Clover Hullers*.—I claim constructing the hopper frame, substantially in the manner herein specified, for the purpose of stopping the draught created by the cylinder and returning it to the screens, as is fully set forth.

ANTHONY OVEROCKER.

No. 292, to original Letters Patent No. 25,071.—*Improvement in Roofs for Railroad Cars*.—I claim the T-shaped piece of timber *C*, in combination with the roof, constructed substantially as described, for the purpose of more readily renewing the roofs of cars, which having been used require to be renewed.

A. P. WINSLOW.

No. 293, to original Letters Patent No. 19,117.—*Improved Churn*.—I claim the herein modification in the structures of the beaters, whereby I am enabled to avoid the sharp angle *m*, seen in Fig. 5, in the manner and for the purpose set forth.

M. L. BAUDER.

No. 294, to original Letters Patent No. 28,467.—*Improvement in Vapor Lamps*.—I claim, first, expanding the lower portion of the wick tube into a chamber or reservoir for the reception of the fluid, as it flows through valve *E*, thereby securing a more steady and regular supply to the wick, and also preventing the fluid from being vaporized too far from the burner.

Second. I claim the combination of the chamber *H*, with the wick tube *C*, and heaters *A* *A*, all being arranged substantially as and for the purposes specified.

ALBERTUS GEIGER.

No. 295, to original Letter Patent No. 28,051.—*Improvement in Corn Planters.*—I claim, in connexion with the seeding wheel F, with its flanges *b*, spring clearer *d*, and adjusting device *c*, as therein claimed, the spring holder *r*, surrounding a portion of the seeding wheel to prevent the seeds from dropping from the cells, until said cells arrive at or over the exit opening, as herein fully set forth and represented.

WM. C. BANKS.

No. 296, to original Letters Patent No. 28,868.—*Improvement in Loading Hay.*—I claim the sectional gathering teeth F, constructed of stationary sections *f*, and sliding sections *f*¹, combined and operating in a machine for loading hay, in the manner and for the purpose set forth.

THOS. J. JOLLY.

No. 297, to original Letters Patent No. 23,587.—*Improvement in Stoves.*—I claim the combination and arrangement of the annular channel or groove *f*, (connected with the air passages *e e*,) with the fire pot A, and surrounding flues *b b*, substantially as and for the purposes shown and described.

I also claim the arrangement of the pivotted door G, with its lower portion extended to form a plane, in combination with the flange F, for safely supplying fuel to the cylinder E when open, and leaving a space for the passage of the products of combustion when closed, substantially as set forth.

G. J. KINGSBURY.

No. 298, to original Letters Patent No. 28,846.—*Improved Watch Key and Guard Bar.*—I claim making that portion *f* of the slot in the sheath, which provides for the longitudinal movement of the sheath upon the tube, of a spiral form, substantially as and for the purpose herein described.

D. F. ELMER.

No. 299, to original Letters Patent No. 27,188.—*Improvement in Ploughs.*—What I claim is the segmental ring D, provided with the screw threads and nuts for adjusting it in the beam A, in combination with the share piece E, constructed, arranged, and operating substantially as and for the purposes herein specified.

WILLIAM H. JOHNSON.

No. 300, to original Letters Patent No. 27,302.—*Improved Paper and Letter File.*—I claim the hollow cylinder or tube A, provided with a bottom *a*, lid *c*, and band or rim *d*, the latter having, in connection with the open end *b* of the cylinder, spiral edges, when said cylinder is used in connection with the link B, and wires or rods *e*, for the purpose specified.

J. B. McENALLY.

No. 301, to original Letters Patent No. 25,438.—*Improvement in Lamps.*—I claim a spring attached to the outside of the upper half of a burner, and extending each way around it from the point where it is attached, with a catch on each end, suitably shaped, to fasten the glass to the burner, and the two parts of the burner to each other.

I claim, also, the oval-shaped dome or cap, made in one piece with the flooring, in combination with the partitions which divide the currents of air which flow to the wick from those which pass through the side openings between the cap or dome and the chimney.

I claim, also, the snuffing blade attached to the interior of the lamp, and actuated by mechanism outside of the same, all made substantially as described, or their mechanical equivalents, and operating in the manner set forth.

G. T. PARKHURST.

No. 302, to original Letters Patent No. 22,957.—*Improvement in Tape Primers for Fire Arms.*—I claim making a continuous tape primer, by inserting a cup or pellet containing the percussion powder, in a recess or indentation formed in a strip of soft metal, alloy, India rubber, gutta percha, or other suitable material, and holding the cup or pellet in place by pressing the metal or substance of the strip partly over the outer edge of the pellet or cup, or by an easily fusible solder securing the cup to the strip, or by means of a cement for that purpose.

T. T. S. LAIDLEY.

No. 303, to original Letters Patent No. 28,571.—*Improvement in Corn and Cob Crushers.*—I claim the revolving arms or claws *u* and *v*, operating and driven substantially as and for the purposes set forth in this specification.

AMOS GLOVER.

No. 304, to original Letters Patent No. 29,104.—*Improvement in Ploughs.*—I claim the

arrangement of a hinged frame, consisting of a succession of angles $A A^1 A^2 A^3 A^4 A^5$, in combination with the beams I of an equal number of ploughs; all constructed and operating substantially as set forth.

HENRY H. ROBERTSON.

No. 305, to original Letters Patent No. 22,897.—*Improved Refrigerator*.—I claim the induction pipe B , in combination with escape pipe C , and fan E , when applied to a refrigerator, to operate essentially as and for the purpose set forth.

WM. SIMS.

No. 306, to original Letters Patent No. 25,542.—*Improved Washing Machine*.—I claim sliding bar C , attaching thereto spiral sprigs $b b b b$, and cord D , circular board B , suspended by spiral springs $b b b$, &c., with a rotary corrugated roller, in combination with pulleys $i i$, and catch F , ratchet wheel m , segment H , cog wheel N , as set forth and described.

ASBURY WILKINSON.

No. 307, to original Letters Patent No. 22,015.—*Improvement in Rendering Paper and other Fabrics Incorrodible*.—I claim the interposing of a mixed powder of calcined feldspar, sulphate of lime, with the metallic oxides of magnesium, calcium, and iron, between the block of caustic alkali, coated with paraffine and the paraffine wrapper.

I also claim the composition of paraffine and rosin, for the purposes described.

THOS. G. CHASE, M. D.

No. 308, to original Letters Patent No. 29,317.—*Improved Coupling for Thills to Axles*.—I claim the substitution of the axle itself for the permanent bolt, whereto, in my original specification, the clasps connected with the spring coupling were designed to be attached, thereby doing away with the band and clip and bolt, ordinarily attached to the axle.

JAMES SADLER.

No. 309, to original Letters Patent No. 27,637.—*Composition to Prevent the Depredations of Insects*.—I claim the grinding or pulverizing, to an impalpable dust or powder, of the "composition to prevent depredations of insects," invented and patented by me, as aforesaid, substantially in the manner and for the purposes herein described.

FRANK G. JOHNSON.

CLAIMS OF EXTENSIONS GRANTED DURING THE YEAR 1860.

Letters Patent No. 4,363, dated January 23, 1846.—Reissue No. 538, dated March 23, 1858.—*Improvement in Machinery for Making Hat Bodies*.—I claim the herein described automatic method of forming hat bodies, having the required variation in thickness at their different parts, by supplying picked fibres to an exhausted former of the size and shape required, in such manner that a larger portion of picked fibres is supplied to that part of the former which corresponds with the thickest portion of the hat body and a less portion to the other parts of the former, substantially as herein set forth.

I also claim the combination of a picking apparatus, a hat body former, an air exhausting apparatus, and a conductor, the whole combined substantially as herein set forth.

I also claim a bow string picking apparatus, constructed and operating substantially as herein set forth, to pick fur presented to it by a suitable feeding and nipping apparatus.

WILLIAM FOSKETT.

Letters Patent No. 4,417, dated March 14, 1846.—*Improvement in Tea Kettles*.—I claim making the spouts of tea kettles, at its junction with the body, to extend from the bulge of the body to within a short distance of the top, whereby, in moulding, the spout can be formed by means of a green instead of a dry sand core, as herein described.

EZRA RIPLEY.

Letters Patent No. 4,411, dated March 7, 1846.—Reissue No. 169, dated May 7, 1850.—*Improvement in Feeders for Screw Machines.*—I claim, first, the method substantially as described of arranging screw blanks, &c., by the motion of oppositely inclined bevelled or curved surfaces with sufficient space between them to receive freely the shanks of the blanks whilst they hang suspended by their heads, the said motion of such surfaces being in the direction of the space between them, substantially as described.

Second. Making one of the said inclined bevelled or curved surfaces in two parts, one above the other, substantially in the manner and for the purpose specified.

Third. Combining with the said oppositely inclined bevelled or curved surfaces a fence or guard plate, placed across from the one towards the other and over the space in which the blanks are suspended, substantially in the manner and for the purpose specified.

Fourth. In combining, with oppositely inclined bevelled or curved surfaces, revolving arms, wings, or beaters, substantially in the manner and for the purpose specified.

And, lastly, in combining with the said oppositely inclined bevelled or curved surfaces, a checking and delivering apparatus, substantially in the manner and for the purpose specified.

SOLYMAN MERRICK.

Letters Patent No. 4,456, dated April 11, 1846.—*Improvement in Saw Mills.*—I claim the combination of the slides with eccentric clamps, slightly pressed together, and so formed upon their faces that, however the thickness of the stuff may vary, the line drawn as a radius from the face of the clamp, at the point of contact with the stuff, shall always make nearly the same angle with the face of the material and the direction of the feed.

THOMAS J. WELLS.

Letters Patent No. 4,442, dated April 4, 1846.—*Improvement in Checking the Momentum of Printing Presses.*—I claim the method herein described of arresting the momentum of the carriage which carries the form of types in printing presses by means of plungers that compress air in cylinders only towards the end of the motions of the carriage, as herein described.

A. B. TAYLOR.

Letters Patent No. 4,452, dated April 11, 1846.—*Improvement in Door Locks.*—I claim the arrangement of the circular plates, for elevating the tumblers into notches in the main bolt and raising and lowering the levers *z z*, which act upon the movable talon, in combination with the movable talon and the preventive stop or flying tumbler, all as herein set forth.

JOSHUA H. BUTTERWORTH.

Letters Patent No. 4,443, dated April 4, 1846.—*Improvement in Registers for Stoves.*—I claim the manner in which I combine the expansion rod B with the register or valve C, by means of the lever K, the whole constructed and operating in the manner and for the purpose herein set forth, or in any manner substantially the same, by which the ordinary connecting joints are avoided.

WASHBURN RACE.

Letters Patent No. 4,453, dated April 11, 1846.—Reissue No. 118, dated June 13, 1848.—*Improvement in Electro-Magnetic Telegraphs.*—I claim, first, the employment in a main telegraphic circuit of a device or contrivance called the receiving magnet, in combination with a short local independent circuit or circuits, each having a register and register magnet, or other magnetic contrivances for registering and sustaining such a relation to the register magnet or other magnetic contrivances for registering, and to the length of circuit of telegraphic line as will enable me to obtain, with the aid of a main galvanic battery and circuit and the intervention of a local battery and a local circuit, such motion or power for registering as could not be obtained otherwise without the use of a much larger galvanic battery, if at all.

Second. I also claim as my invention the combination of the apparatus called the self-stopping apparatus, connected with the clock work of the register, for setting said register in action and stopping it, with the pen lever F, as herein described.

Third. I also claim as my invention the combination of the point or points of the pen and pen lever, or its equivalent, with the grooved roller or other equivalent device over which the paper or other material suitable for marking upon may be made to pass, for the purpose of receiving the impression of the characters, by which means I am enabled to mark or print signals upon paper or other fabric by indentation, thus dispensing with the use of coloring matter for marking, as specified in my letters patent of January 15th, 1846.

SAMUEL F. B. MORSE.

Letters Patent No. 4,470, dated April 25, 1846.—*Improvement in Curry Combs.*—I claim the so combining of the trough-like bars which constitute the comb teeth with the other parts, in

the manner set forth, as to constitute a curry comb with an open back. I do not claim the trough-like combs, or the hollow back, individually, but only in their combination, as herein fully made known.

WILLIAM WHEELER.

Letters Patent No. 4,464, dated April 18, 1846.—Reissue No. 813, dated September 20, 1859.—*Improvement in Magnetic Printing Telegraphs*.—I claim, first, a series of keys, each corresponding to a character, in combination with a revolving part of a circuit, so that the touching of one of the former may cause circuit to be broken or closed for the purpose of printing, substantially as specified, when the revolving part of the circuit is in a certain required angular position properly corresponding to the key struck.

Second. I claim a series of keys, each corresponding to a character, in combination with a revolving portion of a circuit, and a shaft provided with pins arranged in a helix, all substantially such as specified, or the equivalents of the whole, acting to cause circuit to be broken or closed when the revolving part is in a circular angular position in proper correspondence with the key struck, for the purpose of printing a proper corresponding letter by means of any suitable machinery.

Third. I claim a key board, or series of keys, in combination with a rotating portion of a circuit and a type wheel, or its equivalent, so governed as to present a proper letter corresponding with a key touched to produce an impression, the combination being substantially such as set forth.

Fourth. I claim, in combination, a single circuit of conductors, a key board or series of keys, a revolving portion of a circuit, and a type wheel, substantially such as specified, and these, also, in combination with a printing press, and with a key shaft, or either of them, each part being substantially such as described.

Fifth. I claim a series of keys each corresponding to a character, in combination with a type wheel having similar corresponding characters, both substantially as specified when so connected by any appropriate devices that a certain type shall be in a certain locality when a corresponding key is actuated, and I claim these two elements in combination with a single circuit of conductors, and with a printing apparatus, or either of them.

Sixth. I claim actuating or driving a revolving portion of a circuit, or a key shaft, or both of them, by means of a prime mover, acting upon them through a friction connection, the mode of operation being substantially as specified, and doing away with sudden jars, and increasing rapidity of operation, when contrasted with a positive connection between such parts and a prime mover, and also permitting the two to move with varying velocities.

Seventh. I claim actuating or driving a key shaft and a revolving portion of a circuit, or either of them, by means of a friction connection with a prime mover, when the velocity of such prime mover is controlled by a governor, or some equivalent, for the purpose, which either prevents its moving too fast or increases its velocity when going too slow, or performs both these duties substantially under the mode of operation described.

Eighth. I claim governing or controlling the motions of a prime mover, which actuates a printing apparatus by the breaking and closing of an electric or galvanic circuit, so that such apparatus is put in operation both by the breaking of a circuit and by the closing thereof, substantially in the manner specified, and also the controlling of a printing apparatus, so that it shall be permitted to print when a spring returns to its normal position at the time that a circuit is broken, the mode of operation being substantially such as set forth.

Ninth. I claim in a printing telegraph moving the paper to the types to produce an impression on the former, substantially in the manner described, as distinguished from former modes of operation by which the types were moved towards the paper.

Tenth. I claim, in combination, a revolving type wheel and a roller, or its equivalent, charged with coloring matter, so as to deposit such matter on the types as they in succession come in contact with the roller, the combination being substantially such as set forth; and this I claim, also, when the roller is grooved as described.

Eleventh. Being aware of the facts that type wheels have been permitted to revolve step by step when controlled by escapements, and when such escapements have been actuated either by a prime mover governed by a pendulum or by electric magnetic force, I claim actuating an escapement which controls the motions of a type wheel by a prime mover, whose motions are regulated by the breaking and closing of a circuit, under a mode of operation substantially such as described, whereby a small force derivable from magnetism controls any necessary power of a prime mover, there being a breaking and a closing of circuit correspondent with each vibration of the escapement.

Twelfth. I claim a hydraulic regulator, substantially such as described and for the purposes set forth.

Thirteenth. I claim a hydraulic regulator in combination with a type wheel, and a printing apparatus, and a prime mover, the combination being substantially as specified, and causing the press to print when the type wheel ceases to move for a longer time than usual.

Fourteenth. In combination with a type wheel and a printing press or apparatus, I claim apparatus substantially such as specified for making an alarm when that apparatus is per-

mitted or caused to act by the breaking and closing of the same circuit of conductors which, by its breaking and closing, permits the printing apparatus to come into action.

ROYAL E. HOUSE.

Letters Patent No. 4,472, dated April 25, 1846.—Reissue No. 396, dated September 30, 1856.—*Improvement in Manufacturing Hat Bodies*.—What is claimed as the invention of Henry A. Wells, deceased, is forming bats of fur fibres by throwing the fur in properly regulated quantities, substantially as herein described, against a section of the circumference of a perforated cone or other form, as the same is rotated, to present in succession every part of the circumference thereof to the current of impelled fur to obtain the required thickness of bat, substantially as described, in combination with the method of holding the fibres on to the cone or other form during the operation, substantially as described and for the purpose specified.

CHARLES ST. JOHN.
H. A. BURR.
A. H. WRIGHT.
JAMES M. RIBLET.

Letters Patent No. 4,472, dated April 25, 1846.—Reissue No. 400, dated October 7, 1856.—*Improvement in Manufacturing Hat Bodies*.—What we claim as the invention of Henry A. Wells, deceased, in the process of making fur hat bodies, is the forming of the bat of fur fibres on a perforated cone, or other form, in manner substantially as described, in combination with the hardening of such bat while on such cone, or other form, to give it the required consistency to admit of taking it off in a suitable condition for sizing by the well known process of felting, substantially as described.

CHARLES ST. JOHN.
H. A. BURR.
A. H. WRIGHT.
JAS. M. RIBLET.

Letters Patent No. 4,493, dated May 2, 1846.—*Improvement in Ploughs*.—I claim the making the landside, the mould board, and post of ploughs, all of one piece of plate metal, as herein described thereby saving much expense in making, and being more firm and substantial than when made of separate pieces.

I also claim the adaptation of a guard superficially applied to finished ploughs, as herein described, thereby adding to their durability by protecting the parts most liable to wear, when removed leaving that part of the plough as perfect as when new, and may be used or omitted at pleasure.

I also claim the method of attaching and securing the movable progressive share by means of the bolts passing down below the mould board, in combination with the notches in the back edge of the share, substantially as herein described, thereby saving, when this form of plough is used, the great expense of shares, as one progressive share equals in service several of the ordinary kinds.

And, finally, I claim the method of fastening and adjusting the coulter as herein described, thereby presenting successively a great length of cutting edge to sever obstructions before the plough.

JOHN M. MAY.

Letters Patent No. 4,519, dated May 16, 1846.—*Improvement in Sugar Pans*.—I claim so combining them as to present the cane, after it has been crushed by the first set of rollers, to the second set in a body much thicker than when it left the first, the more effectually to express the saccharine matter, and to prevent the second set of rollers from cutting through the mass, the whole being effected on the principle substantially as herein described.

ALFRED STILLMAN.

Letters Patent No. 4,700, dated August 18, 1846.—Reissue No. 645, dated January 4, 1859.—*Improvement in Machinery for Dressing Screw Heads*.—What is claimed as the invention of Thomas W. Harvey is: First. The employment of a pair of spring pincers, which receive the blanks one at a time and present them to the jaws point foremost, substantially as described.

Second. In combination with the mandrel and jaws, or equivalent means for receiving and holding the screw blanks, the employment of a punch or driver for inserting the blank to the required distance, substantially as described.

Third. The combination of the pincers for transferring and presenting the blank to the jaws, or equivalent therefor, with the punch or driver, substantially as described, for driving the blanks out of the pincers and into the jaws, as set forth.

Fourth. The combination of the movable rest with the movable cutter head, substantially as described, and for the purpose of giving support to the blank while under the operation

of the cutter, and to relieve the blank and get out of the way so soon as the cutting operation is completed, and this is claimed whether the cutting operation be performed on the head or any other part of the blank.

Fifth. The particular manner herein described of constructing the adjustable turning head, the slide or seat piece C, the tool holder D sliding on the piece C between the check pieces B¹, with the respective adjustments thereof combined, arranged, and operating so as to effect the setting of the tool substantially as herein set forth.

The manner of operating the griping dies and of separating the blanks in the hopper and conveying them to the feeding fingers, being similar to those described and used in the machine for cutting the threads, is not herein claimed.

H. A. HARVEY,
Assignee.

Letters Patent No. 4,704, dated August 20, 1846.—Reissue No. 107, dated February 22, 1848.—Reissue No. 626, dated November 23, 1858.—*Improvement in Wood Screws.*—What is claimed as the invention of Thomas J. Sloan is: First. Making the core with a conical point, substantially as described, in combination with a body of a cylindrical form, or nearly so, substantially as and for the purpose specified.

Second. Making the core with a conical point, substantially as described, in combination with the thread formed on such conical point of a gradually less depth as it approaches the apex of the core, and with the several convolutions on the conical point, and on the body at equal distances apart, substantially as and for the purpose specified.

Third. Making wood screws with the core of a conical shape along that part of the length of the screw, extending from where the thread begins on the shank to where it becomes of full depth, substantially as and for the purpose specified.

Fourth. Making wood screws with the core of a cylindrical or nearly cylindrical form and with a conical point, in combination with the thread of equal pitch along the conical point and body, that is, with all the convolutions at equal distances apart, and of gradually less depth from the base to the apex of the core, substantially as described.

EAGLE SCREW CO.,
Per WM. G. ANGELL, *Agent.*

Letters Patent No. 4,726, dated August 28, 1846.—*Improvement in Truss Bridges.*—I claim, first, the manner in which I have combined the arch beam with the counter braces, and the other part of the truss frame, by means of the regulating screws that are made to bear on the arch beam, or upon the bearing blocks or wedge pieces C C, so as to effect the same purpose.

Second. I also claim the manner of sustaining the bearing of the braces on the string pieces, by passing the metallic sockets E E entirely through the string pieces, so that the bearing blocks C C, and the nuts F, operate on the upper and lower ends of the sockets, and are not affected by the shrinkage of the wood work.

WM. HOWE.

Letters Patent No. 4,547, dated May 30, 1846.—*Improvement in Dredging Machines.*—We claim the manner herein described, in which we have connected and combined the scraper staff, or arm, with the machine, so that it may be raised or lowered by means of the racks and pinions, by the aid of the triangular piece, arranged and operating as set forth, thereby dispensing entirely with the hollow mast and with the toothed gearing and chains combined with said mast, as used for that purpose in the original machine of Otis.

DANIEL CARMICHAEL.
JASON C. OSGOOD.

Letters Patent No. 4,567, dated June 13, 1846.—*Improvement in Cooking Stoves.*—I claim locating the pipe communicating from the body of the stove to the elevated oven, between the two back boilers, so that its front lower edge shall be contiguous to the fire, in combination with the division strips *h h h h*, and the damper *j j*, arranged and operating as herein described and shown, viz: so as to form one centre flue beneath the connecting pipe *k*, which flue may be closed at pleasure by the damper *j j*, in order to throw the heat through two side flues *i i*, and cause it to pass under the rear boilers before it escapes into the connecting pipe *k*.

I further claim forming the connecting pipe of the horizontal section herein shown and described, that is to say, having the pipe made broad on its front side next the fire for the purpose of obtaining a large capacity of pipe, and also to bring the broadest portion of its section in contiguity with the fire and accommodate the boilers in the rear.

R. D. GRANGER.

Letters Patent No. 4,595, dated June 27, 1846.—*Improvement in Horse Power.*—I claim the special arrangement and combination of the gearing as herein set forth, said gearing con-

sisting of the single large wheel A, driving two pinions C C, on the shafts of the two horizontal wheels E, which horizontal wheels gear into two pinions J J, on the line shaft, there being a bridge G to admit of the passage of the line shaft; the whole arrangement being substantially the same with that herein represented and made known.

DANIEL CARY.

Letters Patent No. 4,606, dated June 27, 1846.—Reissue No. 454, dated April 21, 1857.—*Improvement in Looms*.—I claim supporting the wag staff at its lower end, so that it may slide longitudinally in connection with supporting it in other respects by a joint link, or its equivalent, applied so as to cause that part of the staff which strikes the shuttle to move in a line parallel or about parallel to the race beam, as specified.

And I also claim connecting the lower end of the two staffs below their fulcra, by means of a spring having an intermittent action for drawing them back, in combination with the application of a positive motion above for driving the shuttle, whereby the returning staff aids in arresting the momentum of the shuttle, substantially as herein described.

WARREN W. DUTCHER.

Letters Patent No. 4,608, dated June 27, 1846.—*Improvement in Netting Machines*.—I claim, first, the forming of a true fisherman's or weaver's knot in netting woven in a loom by beaming a regular warp from the yarn to the cloth beam, and the forming of loops thereon, of the nature of those herein described, through which loops a thread of filling is thrown by a shuttle, these operations being effected under an arrangement of parts, substantially the same with that herein set forth.

Second. I claim the combination of parts as herein made known, for giving motion to the thread conductors, so as to wind the thread of warp, beamed as described, around the teeth $n n^1$ and o , in such manner as to constitute a loop, such as is represented in Fig. 13, leaving a middle thread c^2 , to be carried up by the forked teeth. I do not claim the use of thread conductors for winding threads around teeth, they having been used in other manner and for other purposes; but I limit my claim in this particular to the arrangement and combination of parts by which I form, simultaneously, a series of loops of the particular kind herein described for producing the so called fisherman's knot.

Third. I claim the employment of the bearers and forked teeth $r r^1$, which are made to raise the thread c^2 , and then to open out, so as to leave spaces between the threads a^2 and c^2 , through which a thread of filling is to be thrown by a shuttle.

Fourth. I claim the employment of the reed, as herein described, with its hooked teeth, as combined with my machine, for drawing up the thread of filling against the teeth o to aid by its respective movements herein made known in the regular formation of the knots.

Fifth. I claim the taking up the portion of the warp that is liberated in the drawing up or tying of the knots, whether the same be effected by the action of the weight P, operating on a pulley Q, and the other parts concerned in giving the reversed motion to the yarn beam at the proper time, or by the aid of a roller, or other analogous device made to raise or depress the warp between the yarn beam and the thread conductor, or in any other way that is substantially the same, producing a like effect by analogous means. And I do hereby declare that I do not intend by the foregoing claim to limit myself to the particular form of the respective parts herein described, or to the particular position of the angles of the meshes, but to vary these as I may think expedient, whilst I do not depart from the general principle upon which my machine is made to operate, as herein set forth.

JOHN McMULLEN.

Letters Patent No. 4,645, dated July 20, 1846.—*Improvement in Operating Treadle Cams in Looms for Tweeling*.—I claim shifting the cams of looms by means of three or more grooves, running from one into the other, and the last running back into the first and crossing the others, while the cams do not touch the treadles, in manner and for the purpose substantially as herein described.

RICHARD GARSED.

Letters Patent No. 4,548, dated May 30, 1846.—Reissue No. 641, dated December 28, 1858.—*Improvement in Machines for Cutting Screws*.—What is claimed as the invention of Thomas W. Harvey, is the combination and arrangement of two inclined rollers, one or both rotating, and placed at a sufficient distance apart to permit the shanks of the blanks to hang therein freely suspended by their heads, substantially as described, and for the purpose of arranging the blanks, (when presented in a promiscuous mass,) all in a row with their heads up, causing the row to travel toward the lower end, and to be delivered one by one, as set forth.

Second. Combining with the delivery end of the inclined rollers, or equivalent ways, for supplying the blanks in order, a delivery and check slide, and a receiving and conducting tube, or equivalent therefor, substantially as described, to receive the blanks from the row,

deliver them one by one, and conduct them to the place where they are required for after operations, and at the periods required, as set forth.

Third. Combining with the receiving and conducting tube, substantially as described, a transfer, or equivalent thereof, substantially such as described, to receive the blanks from the conductor and transfer them to the mandrel or place where they ought to be subjected to the cutting action, as set forth.

Fourth. Combining with the mandrel or spindle, and with suitable means for holding the screw blanks in line, substantially as described, a sliding turn screw and spring, or equivalent therefor, substantially as described, and for the purposes set forth.

Fifth. Governing the motions of the chaser towards and from the axis of the blank, by combining the chaser head with a carriage and sway bar moved by a cam, substantially as described, and also connecting one end of the sway bar with an adjusting slide, when this is combined with the chaser, or chaser head, as described, whereby the amount of taper to be given to the screw can be regulated at pleasure.

Sixth. Changing the directions of the various cam grooves by means of sliding switches, operated by sliding rods within the hollow cam shafts, and shifted by an index cam by which the various changes of the motions of the machine are effected, substantially as described.

And, finally, making the cam, which operates the sway bar, adjustable on its shaft, substantially as described, for the purpose of adjusting the motions of the chaser to the length of the blank, to insure the proper formation of the point of the screw, as described.

H. A. HARVEY,
Assignee.

Letters Patent No. 4,735, dated September 3, 1846.—*Improvement in Separating Oleic and Stearic Acids.*—I claim the application of heat through a liquid or aeriform medium to the mass, to be pressed in such a manner that the said mass, before it is subjected to pressure, shall be heated gradually and uniformly throughout to such a degree that, while the stearic acid is at no time during the process melted, the oleic acid is rendered fluid enough to be afterwards expressed in the manner above described.

JAS. S. GWYNNE.

Letters Patent No. 4,744, dated September 5, 1846.—*Improvement in Stoves.*—I claim the employment of a stove, such as described, so constructed and placed within the ordinary fire place as to heat the room by its direct radiation, as well as by heating air entering the room from the outside, as described, serving the double purpose of a stove and hot air furnace.

JNO. H. B. LATROBE.

Letters Patent No. 4,750, dated September 10, 1846.—*Improvement in Sewing Machines.*—I claim, first, the forming of the seam by carrying a thread through the cloth by means of a curved needle on the end of a vibrating arm, and the passing of a shuttle, furnished with its bobbin, in the manner set forth, between the needle and the thread which it carries, under a combination and arrangement of parts, substantially the same with that described.

Second. I claim the lifting of the thread that passes through the needle eye, by means of the lifting rod W, for the purpose of forming a loop of loose thread that is to be subsequently drawn in by the passage of the shuttle, as herein fully described, said lifting rod being furnished with a lifting pin u, and governed in its motions by the guide pieces and other devices, arranged and operating substantially as described.

Third. I claim the holding of the thread that is given out by the shuttle, so as to prevent its unwinding from the shuttle bobbin after the shuttle has passed through the loop, said thread being held by means of the lever, or clipping piece g^1 , as herein made known, or in any other manner that is substantially the same in its operation and result.

Fourth. I claim the manner of arranging and combining the small lever $m^1 n^1$ with the sliding box M, in combination with the spring piece Z, for the purpose of tightening the stitch as the needle is retracted, as described.

Fifth. I claim the holding of the cloth to be sewn by the use of a baster plate, furnished with points for that purpose, and with holes enabling it to operate as a rack in the manner set forth, thereby carrying the cloth forward, and dispensing altogether with the necessity of basting the parts together.

ELIAS HOWE, JR.

Letters Patent No. 4,816, dated October 17, 1846.—Reissue No. 127, dated December 26, 1848.—*Bell Telegraph.*—We claim the combination of the bell, pulling wires, and machinery of the enunciator or telegraph as described, or equivalents thereto, with a face or register for indicating signals, whereby we are enabled to represent when needed a plurality of such signals at the same moment, and have them all remain permanent and visible until the object for which they are made is answered.

And secondly, we claim the combination and arrangement of the drops with the tumblers, drop levers, and slides, substantially in the manner and for the purpose herein set forth.

T. D. JACKSON.
ALFRED JUDSON.

Letters Patent No. 4,834, dated November 4, 1846.—*Improvement in Artificial Legs.*—I claim the leg tendon *E*, the spring *k*, and the cord *l*, respectively combining and acting upon the parts *a*, *b*, *c*, and *d*, substantially in the manner and for the purpose herein set forth.

I also claim the improved manner of forming the knee joint, uniting the parts *a* and *b* to each other by means of the hemisphere at the lower end of *a*, the partial concave bevelled to a thin edge on the front side of the upper end of *b*, and the pivot *g*, combined and operating substantially in the manner herein set forth, for the purpose of obviating noise or friction in working the joint, and producing a perfect contour thereof.

I also claim the improved manner of forming the ankle joint, uniting the parts *b* and *c* to each other, the rear side of the lower end of *b* being bevelled to a thin edge passing over and enclosing the heel portion of that part of *c* in the rear of the joint pivot *h*, and the front upper part of *c* at *n* being brought to a thin edge and overlapping the lower end of the front side of *b*, substantially as herein set forth, thus forming a phable joint that will work without noise and preserve its contour in all positions.

BENJAMIN F. PALMER.

Letters Patent No. 4,907, dated December 28, 1846.—*Improvement in Machines for Carving.*—I claim the circular adjustable chucks, by means of which the cutting tool can be made to operate not only on a greater variety of surface, but also with much more accuracy and dispatch as well as convenience.

And I also claim the manner in which I have arranged and combined the several parts and movements of the machine, to wit: combining the two lateral motions of the carriages at right angles, with the motion to incline the tablets, and the manner of shifting the chucks in the course of the operation, so as to bring all parts of the surface (except the bottom) of the block or material to be carved, equally within the operation of the cutting tool, while the cutting tool is governed by the guide working on the pattern, thereby enabling the workman to carve five sides of a cubical figure, and, consequently, to carve all parts (except the bottom) of irregular figures generally by the machine, operating substantially as herein described.

HEZEKIAH AUGUR.

DISCLAIMERS ENTERED DURING THE YEAR 1860.

Letters Patent No. 9,450, dated December 7, 1852.—*Improvement in Machines for Manufacturing Hat Bodies.*—Your petitioner prays that he may be permitted to disclaim, and he hereby does disclaim, so much of the claims in the specification of the said patent as is in the following words: "I also claim covering the perforated cone preparatory to a deposition of the fur thereon with a covering of thin cloth easily pervious to air, upon which the fur is to be deposited, said cloth or fabric to be removed at each operation with the hat body deposited thereon."

H. A. BURR.

Letters Patent No. 1,980, dated February 13, 1841.—Extended for seven years from February 13, 1855.—*Improvement in the Mode of Applying Water to Fire Engines, so as to render their operation more effective.*—Your petitioners, therefore, hereby enter this their disclaimer to so much of the said claim as extends the employing the pressure of a column of falling water, or the tendency of the hydraulic pressure of a column of falling water, or the tendency of the hydraulic pressure on water at rest to pumps other than movable fire engines, and by means of an inflexible pipe.

Which said disclaimer to operate to the extent of the whole interest in the said letters from the date of its grant until the 31st day of May, 1856, and from that date to the extent of one undivided third part of said letters patent, the remaining two thirds interest having, on the 31st day of May, 1856, been assigned.

FRANKLIN RANSOM.
UZZIAH WENMAN.

Letters Patent No. 4,861, dated November 20, 1846.—*Improvement in Mowing Machines.*—Your petitioner, therefore, hereby enters his disclaimer to that part of the claim in the aforementioned specification which is in the following words, to wit:

"I also claim the arrangement for steering the machine as herein fully described, in combination with the grain cutting apparatus, as herein fully set forth."

ANDREW J. COOK,
By his Attorney in Fact, O. S. X. Peck.
WILLIAM D. BALDWIN.

Senate documents

Bd.: [140,5.] 1860/61 (1861) = Congress 36, Sess. 2

Washington, DC 1861

Am.b. 3040-140,5

urn:nbn:de:bvb:12-bsb11037240-5